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JULY, 1919.

# MIND

## A QUARTERLY REVIEW

### OF PSYCHOLOGY AND PHILOSOPHY.

EDITED BY  
PROF. G. F. STOUT,

WITH THE CO-OPERATION OF PROFESSOR E. B. TITCHENER, AMERICAN EDITORIAL REPRESENTATIVE, AND OF PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, DAVID MORRISON, M.A., AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

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## MIND

## A QUARTERLY REVIEW

OF

## PSYCHOLOGY AND PHILOSOPHY

I.—SENSE-KNOWLEDGE.<sup>1</sup>

BY PROFESSOR JAMES WARD.

It is characteristic of empirical philosophy, as we have seen, to start from analytical psychology and to talk first of all of sensations regarded, after the manner of the atoms of the physicist, as a manifold of particulars or psychical 'elements'. But no analysis can give a complete account of the whole that it more or less 'dissects'. Moreover, in this case the analysis is itself incomplete. The ultimate distinction in experience is that of the duality of subject and object, and this implies a certain continuity on both sides. The object as little as the subject is resolvable into a disconnected manifold. Throughout all experience there is something there of which the subject is aware, by which it is affected and with which it interacts. The knowledges with which we have now to deal are the knowledges that this objective continuity is said to 'give'.

But a knowledge for epistemology must be expressed in a proposition. We may therefore confine our attention to human statements, provided we can determine with sufficient precision just *how much* of what is stated concerns the object of sensory awareness or 'simple apprehension,' *as such*. This, however, is not altogether an easy matter, since the possibility of making these statements belongs to a standpoint above that to which the statements are to be referred.<sup>2</sup> "A consistent sensationalism must be speechless" T. H. Green

<sup>1</sup> This article is the third of a series of "Lecture Notes on Philosophy". The writer is hoping to publish others.

<sup>2</sup> On the difficulty of divesting them of the added implications that speech involves, cf. Meinong, *Ueber die Erfahrungsgrundlagen unseres Wissens*, 1906, pp. 23 f.

has said; and the remark is true and trite enough, if it means that infants and brutes neither abstract nor generalise. But it becomes questionable if we take it to mean that there is no knowledge till the sensory level of experience is passed, no knowledge save thought-knowledge. In that case it would seem that we must either (1) so extend the meaning of thought as to obliterate its essential characteristics or (2) fly in the face of facts, and set the continuity of experience at defiance.<sup>1</sup> There is, however, a third possibility. The contradictory disjunction, 'either . . . or'—valid in the region of abstracts, whence change and development are excluded—is often misleading, as we shall have frequently to notice, when not being but becoming is what concerns us. There may be a continuous progress from sense-knowledge to thought-knowledge, and yet the difference between sense and understanding—when at length the latter is fully developed—may be unmistakable; just as is the difference between the child and the mature man, though the one develops into the other without a break.

#### EXISTENTIAL PROPOSITIONS.

§ 1. What now are the simplest statements that express only what is sensibly apprehended? They are among those variously named existential, impersonal or subjectless propositions, such as *pluit, es grünt, it gets dark*, and the like. Such statements, when not ignored by logicians altogether, as they usually—and perhaps rightly—were, have been the occasion of much fruitless controversy among them. This failure to achieve a definite decision is, however, very largely consequent on divergent views as to what is meant by logic. Generally it has been held that logic is concerned with 'thought as thought,' to use Hamilton's language, or—more precisely—with thought as a product rather than with thinking as a process. Its ultimate objects were said to be concepts (represented by terms). Terms as the elements of logical form—and so far regarded as 'given' to it—were said to be brought in judgments (expressed in propositions) into various relations. Of these, that called predication ( $S$  is  $P$ ) was regarded as logically fundamental. Now it may fairly be affirmed that—despite many attempts—nobody so far has succeeded in expanding genuinely existential or impersonal propositions into the full predication form; succeeded, that

<sup>1</sup> But for the study of animal behaviour and of the gradual unfolding of the infant mind, psychology would be more defective as regards 'origins' than it is. On the other hand, but for the prolonged ignorance of the historical method and the neglect of evolution, which lasted till the XIXth century, the plight of the epistemology of sense-knowledge would not be what at present it is.

is to say, in gaining general assent, and not merely in worsening their opponents. In a word the controversy has brought enlightenment rather than definite conviction, leading some to draw a sharper line between epistemology and logic and leading others to merge the two.

Anyhow, once allow that all knowledge is not thought-knowledge concerned with 'relations of ideas' in the phraseology of Locke and Hume—that, on the contrary, some knowledge is just the bare apprehension or awareness of 'matters of fact,' and there is no problem any more. Though sense is speechless, it is not 'senseless'; and we who have sense-knowledge as well as thought-knowledge can surely define knowledge without either denying the one or confounding the two. The characteristics of existential propositions and their epistemological import would doubtless have been recognised and appreciated long ago but for the logical bias that—until the collapse of scholasticism—diverted philosophy from empirical reality to 'dialectical' discussions. Thanks, however, to Hume and especially to Kant, the difference between existential and relational propositions—orthetic and synthetic propositions, as they have also been called—was at length seen to be radical. It will repay us now to consider this difference more in detail.

Whereas Locke still defined all knowledge as predicational—existence being what is predicated in existential propositions—Hume denied that existence is a distinct idea at all. This, no doubt, was going too far.<sup>1</sup> What Hume meant was that an existential proposition was not predicative, implied no 'agreement or disagreement of ideas,' nothing indeed, when sense alone is concerned, but bare awareness—*wahrnehmen*, as the Germans say—of a present 'matter of fact'. Kant in the *Critique of the Pure Reason*, though at one with Hume on the main issue and not improbably influenced by him, treated the question more generally. He took into account not only existential propositions for which immediate awareness sufficed, but also—and in fact chiefly—such as were mediated by inference, as *e.g.*, that God is, that there are atoms. The result was that the radical distinction which he had previously recognised between thetic and synthetic propositions, between A exists and A is B, was so seriously obscured that his commentators have failed to agree.<sup>2</sup> Of this distinction Kant, in fact, seems to have

<sup>1</sup> Though the simple apprehensions of the sensory level must come first, later reflexion may abstract from these the general 'idea of existence,' which each of them implies. To overlook facts of this order was a common failure of sensationalism. Cf. *Psychological Principles*, p. 86.

<sup>2</sup> Unlike Hume, Kant did recognise existence as a distinct concept, which as such, might be a predicate. He insisted, however, that it is

had an inkling even in his first metaphysical essay,<sup>1</sup> and in another written some eight years later he formulated it quite definitely: it is the distinction between absolute and relative 'position,' between cognising or being aware that A is and asserting—A being 'given' or 'postulated' or merely thought—that it is characterised or is to be defined or classed as B.<sup>2</sup>

never a real predicate. And here difficulties begin, for if 'exists' is not a real predicate must it not be a 'logical,' that is to say, a formal predicate? But again, since this would lead to absurdities such as making existential propositions analytical, must not 'exists' after all be a real predicate? "An accurate determination of the concept of existence might," Kant said, "put an end to this subtle (*grüblerische*) argumentation, were not the illusion of confusing a logical predicate with a real one so incorrigible" (*Critique*, A., p. 598; B., p. 626). Nevertheless such accurate determination would have sufficed, and Kant had it, so to say, under his thumb all the while, as is pointed out in the text above. Instead, however, of eliciting this definition from the facts before him, Kant proceeded further to confuse the issue by describing an existential proposition as after all synthetic, although it predicated no real attribute of the subject. But it was synthetic in a new and unique sense.

To follow Kant's exposition further we must bear in mind that he is dealing with cases where existence is still in question. The idea of existence is then presupposed and the existence of the object of inquiry is assumed to be at least possible; for obviously the self-contradictory cannot exist. What happens when at length I assert this existence? I do not, Kant replies, add existence to the object's other attributes: hence there is no real predication, as in the synthetic propositions hitherto recognised: "I only posit the subject by itself with all its attributes, and posit it, moreover, in connexion with my concept as its object (*setze ich . . . nur das Subject an sich selbst mit allen seinen Prädicaten, und zwar den Gegenstand in Beziehung auf meinen Begriff*)"; or in plainer words perhaps, "the object synthetically fulfils or responds to my concept (*kommt zu meinem Begriffe synthetisch hinzu*)". But this is not very lucid after all. The one point which Kant has momentarily forgotten is that at the sensory level of experience this synthesis is impossible: we have then no preliminary idea of existence, nothing but the thesis or positing of the object which awareness involves. Cf. in Kant's *Critique of the Pure Reason* his discussion of the ontological argument, A., pp. 592 ff.; B., pp. 520 ff. As to the disagreement of his commentators, cf. A. Marty, "Ueber subjectlose Sätze, u.s.w.," *Vierteljahrsschr. f. wissenschaftl. Philos.*, Bd. XIX. (1895), pp. 19 ff.

<sup>1</sup> "Principorum primorum Cognitionis Metaphysicae Nova Dilucidatio," 1755, *Sämmtl. Werke*, Hartenstein's ed. (1867), i., propp. V. and VI., pp. 375 ff. Cf. Caird, *The Critical Philosophy of I. Kant* (1889), i., pp. 107 f., p. 111.

<sup>2</sup> *Beweisgrund der Dasein Gottes*, 1783, *Werke*, ii., p. 117.

It is regrettable that our English philosophical terminology has no precise equivalent for *thesis*, *positio*, *Setzung*, familiar though we are with their technical use in other languages. We talk freely of hypotheses and suppositions but not so of theses or positions as epistemologically prior to them all. Aristotle attempted to prove that there must be such indemonstrable theses or beginnings of knowledge but made a point of maintaining that what is logically prior is not what is first known by us. For us knowledge begins with sense-particulars, and he describes, in language which psychology might accept to-day, the unbroken advance of experience from these primary data of sense to the thought-knowledge

And so, from the *existential* standpoint, Herbart and his distinguished follower, Drobisch, have represented the categorical proposition as only relative, or conditioned: its predicate pre-supposes but does not as such posit its subject. Similarly Mill maintained that a so-called 'real definition' postulated the existence of the thing defined.<sup>1</sup>

To object, as some have done, that this distinction makes all predication problematic or resolves categorical propositions into hypotheticals is only to misunderstand it. A relation always pre-supposes some *fundamentum relationis*; but whereas this may be 'given,' that must be either discerned or inferred or assumed. Neither inherence, or the categorical relation of subject and predicate, nor dependence, or the hypothetical relation of antecedent or consequent, is immediately 'given'. For us a datum, what is 'given,' is ultimately just some 'matter of fact'; and in so far and for so long as such data are all, there is nothing to determine the forms that may be made out of them or the structures that may be based upon them. These may fall within the domain of logic or thought; whereas those are and always remain within what we regard as the distinct and independent domain of being or things. But nobody, it may be urged, can suppose that there is no connexion whatever between these domains. This possible remark seems to call for some further elucidation of the sense in which the distinction in question is radical.

The mention of formative processes and resulting structures has brought us back to the duality of subject and object.<sup>2</sup> And here certainly we have a relation and one too that is, for us at all events, primordial. This duality is, however, a relation dividing the one world of *being* into two correlated or complementary halves. So far it does little to discriminate between the world of being and the world of *ideas*, between existential and logical propositions; for only the former are in any sense explicit at this stage. All that such propositions would state, if they could then be expressed, would be the reception or apprehension of what is 'given' or 'there' or objected, *das Gegen-ständliche* or *Vor-gefunden*, as the Germans say. But the metaphors with which we attempt to describe what is too mysterious—or perhaps too simple and ultimate—for description, are apt to mislead. In

which embraces universal truths. He only did not call them absolute positions: that he left to Kant.

<sup>1</sup> Cf. Herbart, *Lehrbuch der Philosophie*, 5te Auf. (1850), pp. 92 f.; Drobisch, *Neue Darstellung der Logik*, 4te Auf. (1875), pp. 61 f.; J. S. Mill, *A System of Logic*, I., viii., § 5.

<sup>2</sup> For we hold that it is the subject that 'synthesizes' the 'data,' which, as we say, it has first merely received—its so-called 'sense-data'.

the first place, there is no spatial relation in the case. Again, all that we can be said to 'receive' from the object or that the object can be said to 'give' us, is not what it 'presents'—for this is what it *is*—but the feeling that it occasions. Leaving metaphors aside, there is, however, one difference clear: the relation is not symmetrical. The object's presence determines the subject's activity. The subjective interest which this activity implies has no objective counterpart; but on this the whole development of experience entirely depends. Such development is the psychologist's business, not ours. Suffice it to say that we come ere long to comprehend 'objects of a higher order' that are not *data* for sense but the *producta* of thought widely understood.<sup>1</sup> But this interested activity may fairly be called creative, provided we recognise that what it creates are not *posita* but *superposita*—if the term may be allowed—founded on but not found among bare *posita*.<sup>2</sup> Herein lies what is radical in the distinction of sense-knowledge and thought-knowledge.

#### IMPERSONAL PROPOSITIONS.

§ 2. The existential ground proposition *It is*—if we may call it so—which sense-knowledge implies becomes an impersonal proposition, as soon as the bare '*It is*' has become definite, as in '*It rains*' or '*It blows*'. The subject, if subject it may be called, is expressed by the neuter pronoun used as an indefinite nominative. What does this *It* mean? Very often some definite object is indicated or 'understood,' as when we ask *What is that?* In such cases, as the answers shew, we are not dealing with a genuine impersonal. But there is a clear difference, as we shall presently see, between the level of experience to which impersonal propositions go back and the level at which propositions with '*this*' or '*that*' as subject arise, so-called 'demonstrative,' 'deictic' or 'indicative' (Ger. *hinweisende*) propositions. When we say '*It rains*' or '*It blows*,' the obvious meaning is not '*Rain is*' or '*Wind is*'. The '*It*' there seems to refer not to a definite something, now *this* now *that*, but rather to the environment

<sup>1</sup> And activity being determined by interest such *producta* are also *praeposita* in the Stoic sense, are due, that is to say, to what may be called 'subjective selection'. If it be allowable to disregard the context we might here adapt the words of Cicero: "*In vita non ea quae primario loco sunt, sed ea, quae secundum locum obtinent, προσημμένα id est producta nominantur*" (*de Finibus*, iii., 16). Cf. *Psychological Principles*, pp. 50, 312, 415 n.

<sup>2</sup> Cf. Lotze's *Metaphysics*, Eng. trans., bk. III., ch. iii., "*On the Mental Act of 'Relation'*" (*Von dem beziehenden Vorstellen*). The whole chapter is especially important as bearing on our present topic.

*as a whole, within which the change we become aware of occurs.*

Now the concept of change pre-supposes some idea of a thing that changes as well as some idea of a cause of the change—either the thing itself or another. But whereas the *apprehension* of change is essential to any experience at all, the conception of change is another and much later attainment. Many, who seem on the whole to accept this interpretation of the impersonal propositions implied in sensory experience, have entangled themselves in needless difficulties and obscured the issue by overlooking this difference.<sup>1</sup> They seem guilty, in fact, of what has been called the psychologist's fallacy. Perhaps it would be fairer to say that all they mean is that whatever is logically implicated is unconsciously involved.<sup>2</sup> But surely this is bad psychology and assumes a scientifically unwarranted and unworkable use of the notion of potentiality.

The difficulty, as we have already said, lies in the gap between sense-knowledge and thought-knowledge which exists for our exposition, though it is really no gap at all. State an item of sense-knowledge and you have done too much—inasmuch as you have transcended it; leave it *unstated* and you want more before you can do anything. To meet this difficulty we have two resources: we might call the one internal or even subjective—provided that term is not misunderstood—and the other we might then call external or objective. In the former, 'working from within' we can historically *retrace* the development of experience, both individual and racial, towards its beginning.<sup>3</sup> In the latter we can interpret animal behaviour on the analogy of what we have previously more or less completely verified in our own.

In the first our inquiries end in the twilight of primitive language and child-speech. Only the latter of these admits of any observation. And even here there are difficulties, since for the most part children learn by imitation: the language they acquire is their mother-tongue and

<sup>1</sup> B. Erdmann, for example, who deals with these propositions under the heading of causal judgments (*Logik*, i., 1892, pp. 304 ff.). But what Erdmann emphasizes is their *logical* implications, not—so to say—their *psychological* content (p. 307). What he fails to see, however, is that this psychological content is itself a judgment and is certainly not explicitly a causal judgment. The problem is to determine as precisely as we can the import of this 'psychological judgment,' as Mansel actually called it: As regards this, Erdmann's exposition seems to be a complete *ignoratio elenchi*. Cf. A. Marty, *op. cit.*, xviii., pp. 432 ff.

<sup>2</sup> Cf. Erdmann, *op. cit.*, p. 309 *fin*.

<sup>3</sup> Albeit, as just said, no individual amongst us can recollect it.



their spontaneous speech-making does not survive long enough to show what might eventually come of it. Still enough seems known to justify its identification with what is conjectured to have been the earliest form of human speech. Though usually monosyllabic, this is always a sentence, a one-word sentence (*Einwortsatz*, as some German writers say)<sup>1</sup> like the cry Fire! or the command Halt! It is holophrastic speech: distinct parts of speech and syntax are a later development. The primordial duality of experience comes out in it, but any further differentiation is minimal. What is expressed is at once subjective attitude and objective situation—*Selbststellung* and *Vorstellung*, as Münsterberg felicitously describes it.<sup>2</sup> Epistemology is only concerned with the latter.<sup>3</sup> What then, it inquires, do we find to be primarily significant in the objective situation?

Turning now to the behaviour of animals we get at once a satisfactory answer to this question: it is some interesting surprise, some change within the environment as a whole, that leads both to the emotional manifestation and to some more or less purposive reaction. When we say It rains or It blows, the lower animals may, as we do, seek shelter or avoid exposure. But they at least know nothing of Zeus or Boreas, whom some imagine must be meant by 'It'. Especially will sudden movements attract attention and awaken expectation, of danger it may be, or perhaps of prey.<sup>4</sup> "It is dangerous," or "It is promising," is how we should sum up such situations, and readiness to flee or to seize would be the subjective attitude assumed. With this the behaviour of dumb animals entirely corresponds. And so, *mutatis mutandis*, of other 'striking' changes of situation. Generally, subjective change in presence of objective change is the least that an experience can imply and what therefore it ultimately means, as we began by supposing. We may, then, now conclude that objective changes are what impersonal propositions always assert.

But how are we to account for this 'It' with which in modern languages genuinely impersonal sentences begin, and to what precisely does this It refer? This seemingly simple

<sup>1</sup> Cf. C. and W. Stern, *Die Kindersprache*, 1907, p. 165.

<sup>2</sup> *Gründzüge der Psychologie*, i. (1900), p. 50.

<sup>3</sup> For psychology, however, the connexion of the two is the starting point in exploring the origin of language. Here the emotional expression which discloses the subjective attitude comes first and the problem is to trace the steps by which it gradually acquires objective significance. Cf. *Psychological Principles*, pp. 287 ff.

<sup>4</sup> Cf. C. H. Schneider's interesting article, *Zeitschr. f. wissentl., Philos.*, iv. (1878), pp. 377 ff.



question has perplexed philologists and even logicians—those of them at least who have attempted to deal with it. And yet, without reaching any explanation that can be called satisfactory as regards its psychological genesis they accept in the main the interpretation here adopted.<sup>1</sup> We need, however, only to recall the psychological distinction between field and focus of consciousness and most of the mystery besetting the 'It' is dispelled. The objective changes that non-voluntarily divert our attention and so lead to a correlative change in our subjective attitude, are never the whole of which we are aware: beyond them, the 'restricted focus of consciousness,' there extends always this 'indefinite field' or presentational continuum. It is obvious, indeed, that change implies some continuity, or that, as Kant paradoxically put it, only the permanent can change; and the field is the permanent, the foci the variable.<sup>2</sup>

The mention of continuity once again brings us back to the duality of subject and object; and here again it may be said that some mystery lies. But is there really anything mysterious? At any rate, it may be urged, if there is not, then our knowledge of these factors, subject and object, can be accounted for: granted that we know what we call their changes, how, then, do we know them? We may reply that we know them, or come to know them, through the continuity of their respective changes; and though this is confessedly not the last word on the whole question, it is the

<sup>1</sup> Prantl, for example, says: "Such impersonal propositions one must, in fact, regard as earlier forms (*Vorstufen*) of the completer judgments in which subject and predicate are clearly distinguished (*eine geschiedene Existenz haben*). . . . We ought therefore not to raise the question what that 'It' may be. . . . But if we must at any cost have an answer, the only reasonable one seems to be that the indeterminate universality (*Allgemeinheit*) of the perceivable world is the subject of all these propositions" (*Reformgedanken zur Logik*, Ber. der Münch. Acad. Phil.-hist. Cl. 2, 1875, p. 187). Again, quoting T. S. Vater (*Lehrbuch der allgemeinen Grammatik*, 1895, p. 120), A. Marty remarks: "One frequently hears it maintained by grammarians that our 'It' or its equivalent signifies something that can be merely indicated (*nur Andeutbares*), something, unknown or mysterious". Similarly Steinthal (*Zeitschr. f. Völkerpsych. und Sprachwissen*, iv, 1866, p. 141): "The impersonal indicates an action as such, the subject of which as mysterious or unknown is merely indicated. Language cannot do else—even in such cases—than assign (*setzen*) a subject for the action; but here it posits (*setzt*) one that we cannot think or should not try to think (*nicht denken soll*).". And again Bergmann (*Reine Logik*, 1879, p. 33) speaks of impersonal propositions as "existential judgments . . . but as at the same time involving the attempt (*der Versuch*) to think the world as the subject and the existing thing as a modification of it". Cf. especially Lotze's *Logik*, 1874, § 49.

<sup>2</sup> *Critique*, A., p. 187; B., p. 230 *fin*.

only answer we can make at this stage, and it is perhaps sufficient for the present. But it brings out another ultimate fact—or mystery, as some may prefer to call it. That is the plasticity—by which we mean the progressive differentiation, the retentiveness and the assimilation—characteristic of the development of experience as a whole. When as psychologists we talk of a presentational continuum or psychoplasm,<sup>1</sup> those ‘general characteristics’ or ‘fundamental processes’ are the *ratio cognoscendi* of it; while it is the *ratio essendi* of them. It is useless to call one a fact, the other a mystery; for they are both really the same.

Returning once more to the ‘It’ of impersonal propositions, we may at length conclude that as regards sense-knowledge this It implies nothing more than that continuum. It does not refer to a definite individual such as a deity nor to a rounded and complete whole such as the world. It is not Herbert Spencer’s Unknowable—though like it in being ‘a necessary datum of consciousness’. What we specially attend to from moment to moment is always but a part of this continuum, is inseparable from it, and afterwards retained within it. In calling these propositions of sense-knowledge ‘existential’ what we emphasize is the definite ‘position’ or thesis which they express: in calling them ‘impersonal’ what we emphasize is their logical incompleteness, their lack of definite synthesis. Genetically, they are inchoate judgments, essential to, but not sufficient for, thought-knowledge. Hence the perplexities we have noticed of those who attempted to deal with them as they are now expressed in language, without deigning to inquire how they came to be. Schleiermacher and Trendelenburg alone seem to have taken their origin into account. As the latter tersely puts it, “we think in predicates”—a pregnant saying which throws light on one stone of stumbling in this controversy, *viz.*, the use of the term ‘subjectless propositions’<sup>2</sup>—propositions, that is to say, only implying the objective continuum which always confronts the experient and explicitly referring only to such of its changes as interest the experient by furthering or hindering his welfare.

Affectivity and activity make up ‘the irreducible minimum’ of experience on the subjective side and by interaction with the objective side experience becomes a complete whole. Sensory and motor presentations are those which we know

<sup>1</sup> Cf. *Psychological Principles*, ch. ii., § 1, pp. 30 f.; ch. iv., § 2, pp. 75 f.; ch. xvii., § 2, p. 412.

<sup>2</sup> Cf. Trendelenburg, *Logische Untersuchungen*, 2te Auf. (1882), ii., pp. 208 ff.

first. The latter, as voluntarily determined, we come afterwards to attribute to self; and the former, as non-voluntarily determined, to a not-self. Then the actions are explicitly 'predicates,' have, that is to say, a definite subject: at first they were only implicitly such. In complete accord with this is the grammatical form of impersonal propositions; they are invariably verbs. Slightly amending a sentence of Trendelenburg's we may say: action, "as we still see in impersonal sentences, can be apprehended by itself: but the thing that acts, only through its action. Hence the beginning of speech will lie in verbs, but in such a form that they of themselves constitute a judgment, or rather, the rudiment of a judgment underlying the development of predicates and subjects alike".<sup>1</sup>

#### DEMONSTRATIVE PROPOSITIONS.

§ 3. A great advance is made when such inchoate propositions—positing a 'matter of fact' but indicating no definite subject—lead on, thanks to the plasticity of the continuum, to propositions which do both; when, that is to say, from impersonal propositions with no subject but the continuum, we pass to the demonstrative propositions in which the subject This or That is not merely objective but is itself a definite object. It would be out of place here to describe in detail the perceptive process by which this restriction is carried so far that we can say, This is red or This is bitter or even This is blood or This is gall—carried so far that nouns, adjectival or substantival, come upon the scene. When, however, that is the case, we can proceed to discriminate between This and That: This is red, that is white; or This is blood, that is snow; or again This is bitter, that is sweet, or This is gall, that is honey.

In beginning the exposition of these more advanced knowledges with human statements, statements, that is to say, made at the higher level of thought-knowledge, we have again to remember that such knowledges are possible without thought and without speech.<sup>2</sup> To understand this advance we must regard such knowledges from the standpoint of the lower knowledges which they presuppose, not from that of the higher to which they lead. The advance, as already remarked, lies in the fact that these propositions are no longer strictly impersonal. And yet they have a certain continuity with impersonal propositions; but whereas those refer to the one universal It, these refer to many, which are

<sup>1</sup> *Op. cit.*, pp. 213-215.

<sup>2</sup> *Cf. above*, p. 257 *fin.*

differentiated within that one and so can be distinguished from each other. These many particular Its, however—this, the it here by me (*hoc*) and that, the it there by you or by him (*istud* or *illud*)—not only differ from each other as subjects in respect of the relations between 'here' and 'there,' etc.—to which we shall return later—but their predicates also differ in another respect to which we may turn at once.

The predicate when expressed in language may be either an adjective or a substantive; and this difference in the end is vast. But which is first? This is a nice question and largely a psychological one. Psychologically it is probably true to say the adjectival is prior to the substantival, for sense-data or simple percepts seem clearly to precede the complexes of these that we may call intuitions of things (German *Ausschauungen*).<sup>1</sup> And epistemologically we may say—*cum grano salis*—that in proportion as the adjectival form predominates the judgment lacks the characteristic of the demonstrative and approximates to a purely impersonal one. This is in keeping with what comparative psychology teaches concerning the development of perception, as we proceed from lower to higher forms of life.

Our human perception, or intuition, of things as expressed in language is, of course, for us the nearest, the highest and the clearest. Unfortunately, in consequence of failure to appreciate the historical method or to respect the principle of continuity, epistemology has not merely started from the human level—as it must; but it has tended to assume that this intellectual level is where knowledge itself begins.<sup>2</sup> It has also ignored the fact—the significance of which language tends to conceal—that demonstrative propositions range between two extremes. At the lower extreme are the adjectival demonstratives with predicates answering to simple percepts or 'sense-data'. They presuppose propositions of the strictly impersonal form, from which they have gradually been differentiated: e.g., This (it) is red. At the upper extreme are the substantival demonstratives with predicates answering to complex percepts or intuitions of a thing. They presuppose demonstratives of the adjectival form which have been gradually integrated: e.g., This (thing) is a rose.<sup>3</sup> Demonstrative propositions at this upper extreme are continuous with the

<sup>1</sup> Cf. Eisler, *Wörterbuch der philos. Begriffe*, 2te Auf., p. 41.

<sup>2</sup> Even Sigwart has involved himself in some difficulty here in connecting impersonal judgments with what he calls *Benennungsurtheile* (cf. A. Marty in the article already referred to, Bd. xviii., pp. 327 ff.).

<sup>3</sup> Cf. on the mutual relation of concept and judgment, *Psychological Principles*, pp. 305 ff.

typical categorical propositions of logic in which both subject and predicate are concepts or terms, as in *This flower is a rose*. But now for logic concepts or terms are what is 'given,' and its first concern is to analyse them with a view to their definition. Of this process Leibniz gave very early what we may regard as a complete account: "*Analysis haec est: datus quicunque terminus resolvatur in partes formales, seu ponatur ejus definitio: partes autem hae iterum in partes, seu terminorum definitionis definitio, usque ad partes simplices, seu terminos indefinibiles*"<sup>1</sup>.

To these indefinables or 'simple, not farther analysable elements,' as Sigwart calls them, belong the adjectival predicates of the first form of demonstrative proposition, the primary presentations, that is to say, which in the course of our perceptual experience have been gradually synthesized so that we reach at last demonstrative propositions of the second form. But if we now imagine logical analysis to have completed its work we should find ourselves confronted by a bewildering aggregate—a chaos, we might fairly call it—of isolated elements.<sup>2</sup> Such an experience there has never been. Yet a situation of that sort is often imagined as that from which experience starts. Many psychologists and epistemologists have, in fact—overstraining the much abused metaphor of matter and form<sup>3</sup>—regarded sense-data as nothing more than the disconnected 'manifold' that would be reached by a thoroughgoing logical analysis of the concepts which experience only acquires at the intellectual level. What the psychologists overlook is the gradual differentiation of the presentational continuum and the fact that integration and adaptation—which imply meaning—keep pace with this. What the epistemologists overlook is that such perceptual synthesis or integration must precede the logical analysis which they afterwards perform.

We are here brought up against a new problem in which

<sup>1</sup> "*De Arte combinatoria*," *Leibnitii Opera philosophica omnia*, Erdmann's ed., 1840, p. 23. But it was Descartes who had the signal merit of making thoroughgoing analysis the foundation of scientific method to the great detriment of the 'historical method'. Cf. his *Discourse on Method* and the two posthumous fragments supposed to have been written in connexion with it.

Cf. also Drobisch, *Logik*, p. 17; Sigwart, *Logik*, 2te Auf., 1889, i., § 41, p. 328 f. Sigwart here compares sense-data to the letters of the alphabet: they can only be named but not explained. Hegel had compared them to atoms (*Encycl.*, § 20).

<sup>2</sup> Schleiermacher actually speaks of intellect as confronted only by 'a chaotic manifold of impressions,' *Dialektik*, § 108, quoted by Vaihinger.

<sup>3</sup> This is notoriously the case by Kant. Cf. on this Vaihinger's elaborate *Commentar z. Kant's Kritik*, Bd. II. (1892), pp. 58 ff.

sense-knowledge is regarded primarily from what we may call the objective side. To deal with this problem now will entail a brief digression. It will be best to begin *de novo*, even at the risk of some repetition; for if the question here raised can be satisfactorily solved, its solution will facilitate the consideration of the larger question previously raised; *viz.*, that concerning the dualism of sense-knowledge and thought-knowledge which rationalism has tended to maintain when it has recognised sense-knowledge at all.<sup>1</sup>

#### SENSE-DATA.

§ 4. At the outset it may be well to clear away an obscurity in our current terminology that has led to much confusion. The terms sensation and sense-datum are commonly used as synonyms. Sensation, however, as a psychological term—and one that it might be well to avoid—implies a process involving both subject and object alike. It is, however, only to the objective factor in this process that the term sense-datum applies. This difference comes out when, as often for convenience and yet incorrectly, we speak, for example, of a sensation *of* red or *of* bitter. Red and bitter correspond to what is objective in the sensory process, and the inaccuracy lies in confusing this part with the whole. This objective part is the sense-datum. Epistemology then, which is concerned with knowledge not with processes of knowing, has here no direct concern with sensation but only with sense-data. Hence the question now before us is: Are sense-data objects of knowledge? If they are, the continuity between sensibility and understanding, which Kant thought to be possible though it was unknown to us, will become at any rate clearer.

Nevertheless, we shall find, if we have not already found, that we cannot ignore the development of experience as a process save at the risk of prejudging this question. Starting, as logical analysis does, with discrete constructions, for that is what concepts are, then at the end, supposing the end attained, there will be no 'form' or structure left, but only 'matter'—which has no form. If, as Leibniz supposed, there is no end, still for us the final residuum is confused and that is tantamount to its being but matter for us. We may confidently trace the still prevalent assumption that sense-data are but the *material* of knowledge, rather than its rudimentary beginning, to the too exclusive reliance on logical analysis on the part of the rationalistic thinkers of

<sup>1</sup> In Lecture II.

the continent, which has so prejudicially biased psychology. The sensationalism or psychological atomism that still lingers on is partly due to this. Descartes was here followed by Locke, and Locke by Hume and Kant.<sup>1</sup> But this rationalistic procedure is here fundamentally defective just because it starts from thoughts and not from things, therein perpetuating the false method of the ancients already referred to.<sup>2</sup>

What we want is not logical but real analysis: and for that we have to look to psychology. But it must be a psychology that starts from experience as a continuous process, for which therefore not structure but function is the primary fact. But now in continuous process what is once found essential must be essential always. If the mutual interaction (Kant's *dynamische Gemeinschaft*) of subject and object be the form of experience, then, in no experience, however primitive, can this interaction be lacking. Further, in such a continuous process, whatever are the essential characteristics of its two factors must likewise persist. If this be true, then the term 'matter' can never be appropriate to the object of experience, if by matter is meant the utterly indeterminate and formless; nor the term 'atom' if that is to imply absolute discontinuity.<sup>3</sup> Mere being devoid of determination of any

<sup>1</sup> Cf. Locke, *Essay* I., i., "Though the qualities that affect our senses are, in the things themselves, so united and blended that there is no separation, no distance between them: yet it is plain the ideas they produce in the mind enter by the senses simple and unmixed". In § 2, as elsewhere, he calls these simple ideas 'the materials of all our knowledge'. Both positions his later expositions implicitly contradict—especially, his treatment of the idea of existence, which is particularly relevant to the question before us. As to Hume, cf. his *Treatise*, Green and Grose's ed.: "There are not any two impressions that are perfectly inseparable," i., p. 319; "Every perception is distinguishable from another and may be considered as separately existent," p. 495. The fact that Locke began his *Essay* with a polemic against Descartes has long tended to obscure how greatly he was influenced by the Cartesian philosophy. The very method that led Descartes first of all, *more geometrico*, to distinguish and divide to the uttermost, led Locke—notwithstanding his professed intention of following a 'historical, plain method'—to begin by analyzing the entire furniture of our minds into simple separable ideas. The atomic sensationalism of our English psychology is thus after all largely due to the influence of that rationalism which epistemologically is the polar opposite of all that is empirical. Cf. note 1, p. 269; also Prof. Norman Smith's *Studies in the Cartesian Philosophy*, 1902, pp. 181 ff., 248 ff., 260 f.

<sup>2</sup> In Lecture I.

<sup>3</sup> What then about 'matters of fact,' it may be impatiently retorted: are not sense-data matters of fact? And what about the absolute theses or positions that are prior to syntheses or logical propositions? What form have they? This is a possible but superficial quibble suggested by the terminology in use and silenced by its meaning. Matter of fact means what is actual (Ger. *Thatsache*) and positing is the immediate cognisance of such actual existence (Ger. *Dasein*). Both imply some present



sort may make the beginning for pure thought—as with Hegel; and mere matter as pure potentiality, *i.e.*, as devoid of any actual determination, may be the presupposition of form—as with Aristotle; but concepts of this order plainly transcend experience as actual process. There 'It is' as little suffices to express the objective situation as 'I am' to express the subjective attitude. It is equally plain that a manifold of discontinuous presentations could never yield the sort of continuity that we find in experience. The failure of the Associationist psychology, which is based on that assumption, is evidence of this.<sup>1</sup> There is, of course, room enough for the employment of the metaphor of matter and form in describing experience: it is applicable in a relative sense wherever we find synthesis; all objects of a lower order are matter that is formed into objects of a higher order. But sense-data, which we may regard as in this respect matter of the lowest order, still have form. This we may proceed to see.

In the first place, a sense-datum is primarily experienced as a change. Its apprehension is an event in the course of the experient's life; it is impressive because it is interesting, and so along with the apprehension there goes always implicit appreciation.<sup>2</sup> Thus at any given moment what an experient is aware of is some situation to which it strives to adapt: to describe such a situation as formless is therefore surely a misnomer, for obviously a change cannot be indefinite, least of all when it entails interaction—an adjustment of changes, that is to say. Moreover, if we regard experience as a continuous process, there is never a time while it lasts, when the subject is confronted either by a bewildering *embarras des richesses* or by an overwhelming sea of troubles, such that any subjective selection is impossible. If at the outset we were pelted by an aggregate of disconnected presentations such as Kant imagined, no matter what forms of intuition or of thought might 'lie ready in the mind,' all would be unavailing. In point of fact, however, the range of a given subject's experience only advances *pari passu* with its assimilation and integration of previous differentiations of its continuous objective environment. Surely then the sense-data of which it is aware—and no others count—are severally knowledges, and collectively constitute its objective experience; for how else could this experience advance?<sup>3</sup> True,

determination within experience: the one term referring to its being there, the other to the subject's consciousness of it.

<sup>1</sup> Cf. *Psychological Principles*, pp. 75 f., 192 f., p. 412.

<sup>2</sup> *Ibid.*, p. 387 f.

<sup>3</sup> *Ibid.*, p. 143 *fin.*, p. 411 *init.*, p. 414 f.



these sense-data are indefinables for logic; but unless they were from the first determinate for experience, they would never become recognisable, perceptible. But inasmuch as this is what happens whenever they are interesting, they must have form: we cannot regard them either as pure matter or as absolutely atomic—concepts altogether incompatible with experience.

In the second place, when we have advanced to the thought level, we find on comparing our sense-data that—though severally indefinable—they nevertheless have characteristics. And these characteristics, though really inseparable, are still distinguishable, yielding, in fact, certain categories of which they are the prime source, *viz.*, intensity, quality, extensity and protensity. Thought discerns these characteristics but it does not constitute them: they are always there, and determine the subject's reaction.<sup>1</sup> Surely here again then we have evidence that sense-data are objects of knowledge.

These 'categories of sensation,' as v. Hartmann expressly called them,<sup>2</sup> were also, in fact, recognised as such by Kant, though forced almost beyond recognition into the Procrustean bed of what he was pleased to describe as 'the architectonic of pure<sup>3</sup> reason'. In conformity with his 'schematized categories' he formulated certain principles which were to determine the application of these to experience.<sup>4</sup> The second group of these principles, concerned with the categories of *quality*, he called 'Anticipations of Perception'. In place of three such 'anticipations'—answering to the three categories of quality—he gives, however, but one, and in that, as formulated in the *Critique* itself, he refers only to the intensity which every real sensation must possess. In the *Prolegomena* (§ 24), however, 'intrinsic quality' (*eigentliche Qualität*) is also mentioned as if admitting of anticipation. Again, among certain manuscript annotations, referred by their editor to the period when the critical philosophy was in process of incubation, there is a note to the effect that "in all knowledges the object has both matter and form, that is to say quality".<sup>5</sup> And, finally, in his exposition of the schemata—in an otherwise very obscure passage—he connects intensity

<sup>1</sup> Cf. *Psychological Principles*, pp. 247 f., 254.

<sup>2</sup> Cf. his *Kategorienlehre*, 1896: *Die Kategorieen der Empfindung*, pp. 1-104.

<sup>3</sup> *Critique*, A., p. 832; B., p. 860. Cf. on this an important little book by E. Adickes, *Kant's Systematik*, u.s.w. 1887, and especially in connexion with the present context, pp. 49 ff.

<sup>4</sup> *Critique*, A., pp. 158 ff.; B., pp. 197 ff.

<sup>5</sup> *Reflexionem Kants zur Kritik der reinen Vernunft*, edited by B. Erdmann, 1884, p. 173.

with the transcendental *matter* of all objects as things *per se*: this constitutes their reality (*Sachheit*).<sup>1</sup> The long and short of all this seems to be the admission of intensity and quality as sensory categories.<sup>2</sup> The first group of principles pertains to the categories of *quantity* and is entitled 'Axioms of Intuition'. Here again but one axiom is announced in place of three, and that one refers to space and time as *quanta*. Its purport is that "all objects of experience are intuited as spatial and temporal magnitudes": this may be a fact, but it is no axiom. Its intention was to 'make pure mathematics in their full precision'—though independent of objects of experience—'still applicable' to them. And that may be true, but only provided that extensity and protensity are of themselves original characteristics of sense-data: otherwise what basis for 'application' is there? Kant's two stems of knowledge here come inconveniently to the fore. "It is the mistake of a falsely guided reason," he urged, "to imagine that one can separate the objects of the senses from the formal conditions of our sensibility"—which he himself assumed to be independent of them. The converse mistake is the real one, and of that he was guilty himself when he began by separating extensity and protensity from sensations, or rather by losing sight of them altogether, basing his *Critique* on an impossible dualism of pure form and pure matter. A more thorough psychological analysis at the outset would have saved him from that mistake; as it is, in these so-called axioms of intuition he unconsciously testifies to a truth he had failed to see before.<sup>3</sup> Thus imbedded within the formal structure of Kant's system we find *sensory* categories: what changes they may necessitate in it, when they are fairly unearthed, remains to be seen. Meanwhile we note that they are (1) intrinsic quality and (2) quantitative continuity, as (a) extensive, (b) protensive, and (c) intensive, or real, *i.e.*, the matter that answers to quality as the differentiating form.

<sup>1</sup> *Critique*, A., p. 143; B., p. 182.

<sup>2</sup> In his table of categories, it will be remembered, quality refers to the so-called logical quality of judgment (as being affirmative, negative, or 'limitative'). *A propos* of this Professor Riehl pertinently remarks: "It is utterly unintelligible what the so-called quality of a judgment has to do with sensation" (*Der philosophische Kritizismus*, 2nd ed., i. (1908), p. 542 *fin.*) Here we have one more proof that Kant could not really escape the recognition of sensory categories.

<sup>3</sup> Cf. *Psychological Principles*, etc., ch. v., § 2., pp. 105-107. Cf. also Stumpf, *Ursprung der Raumvorstellung*, 1873, pp. 10 ff., a work which I ought to have mentioned in writing my P.P. Stumpf's '*psychologische Theile*' correspond to what are there referred to as 'characteristics of sensations'.

(To be continued.)

## II.—BERGSON AND ABSOLUTE IDEALISM (II.).

(Continued from p. 53, Jan. MIND.)

BY S. RADHAKRISHNAN.

### III. MECHANISM AND TELEOLOGY.

WHILE the absolutist holds to a teleological conception of the universe, rejecting mechanism, Bergson rejects both. But to make his system consistent and satisfactory, Bergson is obliged to admit teleology. To Bergson, reality is creative evolution. It is spontaneous creative process. Time is the very substance of reality. Mechanism and teleology both reduce time to an empty appearance, and rob the universe of everything in it which is unique and novel. The universe is determined by a first cause—according to mechanism, by a final cause—according to teleology. Mechanism regards "the future and the past as calculable functions of the present," and claims that all is given (*C.E.*, p. 40). The world of nature becomes a machine in which there is no room for the novel, the unique and the individual. If we cannot grasp the whole universe in one comprehensive vision, it is due to our mental impotence. Nor do we fare better with teleology which conceives the world as the realisation of an absolute purpose. When the world is the working out of a prearranged plan, the cosmic process is non-creative. The world is committed to an externally imposed programme. Real time and duration become futile. The end is inevitable. There is no risk, no failure, no uncertainty. But to Bergson nothing is inevitable. Everything is in the making. Time is supremely significant and real. Both mechanism and teleology go against the central conceptions of his philosophy. To both everything is given ready made from the first. Only teleology substitutes the pull of the future for the push of the past. It is inverted mechanism. Whether the individual is the result of the interaction of atoms or only a passing thought of God there is no place for the individual with his freedom and individuality.

But is Bergson's account of the nature of creative evolution correct? Is it an incessant flow without any plan or

purpose? Does it not reveal a tendency or a fulfilment of end or aim? Are we to think that this process of eternal change follows no ends and pursues no purposes? In his anti-absolutistic bias, he regards the absolute as an eternal immutability rendering all agitation and disquiet illusory. And so Bergson starts with his conception of reality as a Becoming, but this leaves no room for rest and stability. Perpetual flux is the real. Bergson's cosmic principle seems to be the mirror of the twentieth century soul who lives in an atmosphere of constant hustle and excitement, in a perennial maelstrom of events. The world becomes unintelligible caprice as the creative principle is looked upon as obeying no laws, and fulfilling no ends. In short absolute chaos would prevail, in which nothing rational could be undertaken. Chaos is God. In a world of such absolute caprice, man will have to shut his shop and descend into dust at the earliest opportunity. It is impossible that Bergson should mean all that he says when he is emphasising the absence of teleology. It cannot be that he is satisfied with a world without rhyme or reason.

If the world is only a series of disconnected states, we cannot be sure that the world is progressing at all. How can we be sure that the changes are all in the right direction? Unless we have a whole which is present throughout the universe, we cannot have any guarantee of progress. In its absence, the world would be mere caprice, purposeless growth. Then what appears to us would be the ultimate reality. If the world with its horror and imperfection were the sole reality, if there were not in it a stable spiritual purpose which is working for the values and the ideals of man, then we shall be compelled to view the universe as a great tragedy indeed. If faith in the whole, faith in the possibility of harmony in the world is absent, what is there to inspire effort? Bergson will not hold to any such conception of an irrational *durée*, for "an absolutely irrational *durée* might suddenly stop creating, explode, go into nothing and refuse to come back; its creations might be like the frenzies of a madman".<sup>1</sup> Bergson does not hold to any such conception. As much as any absolutist, he holds to a conception of an identity in difference, a whole in the world. Even with him all is given. Bergson's creative principle does not create without nothing. It contains an infinite number of possibilities. It is an "immensity of potentiality" (*C.E.*, p. 272). Bergson is not right in thinking that nothing is given. The creative principle, like the Leibnitzian monad is self-sufficient

<sup>1</sup> Frank Thilly in the *Philosophical Review*, vol. xxii., p. 127.

and has all the potencies in it. Bergson does not hold to the idea of a growth out of nothing or void. The "organised world is a harmonious whole" (p. 53). The whole is an organic development where every stage is the sum of its preceding stages. There is enough of law and regularity in the working of the creative principle. The items of the creative evolution obey order and are not irrational. The *elan vital* battles with matter and overcomes it. Though Bergson does not admit the conception of a fixed goal towards which the process of evolution is tending, he still holds to the reality of a conscious tendency. Bergson does not say that the flux of the world is the whole. He postulates a God who is "the source whence issue successively, by an effect of his freedom, the currents or impulses, each of which will make a world". Certainly he does not think that "what has always existed is the world itself" (Bergson's letter, quoted in pp. 42-43 of Henri Bergson, *His Life and Philosophy*: Ruhe and Paul). Here Bergson clearly tells us that the world of change is not the all, but there is a God who is the source of it. There is unity of direction which ensures that there is no ambiguity, at least, no chance in the outcome. Thus Bergson is obliged to admit that while reality is a flux in one sense, in another it has a static aspect. But when Bergson recognises the reality of a whole in which changes occur, he cannot say that time is the ultimate reality. So if progress is to be assured, there must be a whole; and if there is whole then time is not the absolute reality. As Bradley puts it, "If there is to be no supreme spiritual power which is above chance and change, our own spiritual interests are not safeguarded. But with any such power it seems to me nonsense to talk of the absolute reality of time" (*Truth and Reality*, footnote to p. 250).

Bergson, off and on, reminds us that the nature of reality resembles our psychical life. Again the only teleology of which we are conscious is the teleology of our human life. Every other teleology is an inference. How does our human life proceed? Man aims at and pursues ends. We cannot say that his purposive willing and deliberate adaptation of means to ends freely chosen are all delusions. The presence of purposes freely chosen does not deprive man of his freedom. He is not in the grip of a law of progress imposed from without; for his ideals are set for him not by events, not by law, but by himself. There is novelty also as the course of moral life is the process through which an abstract ideal acquires flesh and blood, colour and perfume. Moral progress depends on new and untried expressions of creative

spontaneity and freedom. The ideal is not realised, and the process of realisation will be something novel. We have in it the novelty of becoming. Teleology operates in human life without depriving it of its freedom and initiative creation and novelty. We do not say that simply because a purpose is present ; therefore, moral life is a mere mechanical adjustment to a purpose imposed from without. Ethical life is a free spontaneous creative expression of the total active self of man, we have in it not merely the changing process but also the stable purpose. Of course, we do not believe in a dualism between the process and the purpose, for the process is only the expression of the purpose. If we make the purpose external to the process then the process becomes something externally determined. The two are aspects of the one whole. The process and the purpose evolve together ; they are the twin expressions of the concrete life. The end is not predetermined but grows *pari passu* with the activity of its realisation. If then the moral life of man is the free pursuit of self-chosen ideals, cannot we conceive the cosmic life on its analogy ? For after all the ideas of freedom and novelty are derived from human life. "Dynamism starts from the idea of voluntary activity given by consciousness," so the cosmic process may be the free pursuit of ever-growing cosmic ends. As human conduct is free activity and consists in the active creative expressions of the entire abundant past experience in free acts, even so the world may be viewed as a free spontaneous creativity. Random busyness without end or aim may result in abortions and misdeeds but not in genuine creativity. Bergson's creative evolution is a regular continuous evolution fulfilling plans and purposes. The rich world with its wonderful variety is more the expression of an artistic genius than of aimless dilettantism. So a teleology of the highest kind prevails in the cosmic evolution.

It is urged that the absolutist theory that makes the process of the world a mere revelation of the nature of the whole makes man lose his freedom. The work of the universe becomes a twice-told tale. It adds nothing to the original unity. Reality exists ideally in the absolute, and the absolute is experience as it develops in time. It takes all as given and makes freedom an appearance. It cannot be reconciled with a real time process. Reality becomes perfection eternally complete, something to which we can add nothing. But absolutism believes that the principle of wholeness works through man. There is a progressive realisation of the absolute in the world. But if the end is already achieved, then the moral struggle is useless. The analogy of logical

inference suggests how it is possible for the whole to be realised in a real process without making the process lose its sense and significance. We speak about the paradox of inference, that the conclusion must be contained in the premises and must also be something new. Both sides of this are true. Even though the conclusion is contained in the premises, it still requires the exercise of the logical intellect to draw it out. In the same manner, even though the essence of the world process is contained in the absolute, still the effort of man and the process of the world are needed to draw out this essence and make it concrete. We do not say that the movement of thought is either unreal or unnecessary. It is a real activity that creates. Why should we say that the work of the world is either unreal or unnecessary?

Bergson may fear that if there should be an ultimate purpose, then when that purpose is gained, the process or evolution of the universe may come to a full stop. If life were nothing more than the realisation of a plan, then when the goal is reached there must be cessation of activity; but to Bergson there is no finality as there is unending creation. "It is a creation that goes on for ever in virtue of an initial movement" (*C.E.*, p. 105). It is so even for the absolutists as it is impossible for the end to be reached in the time process. The universe can never become the complete expression of reality; for reality is like the complete integer trying to express itself in terms of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , etc. This can go on extending without end but will never reach the limit. The whole remains an ideal only, however much the ideal is realised in the distinctions of the world. It is impossible for us to realise the whole in the finite world. We cannot empty the sea with a shell. We see that Bergson holds to an immanent evolutionary teleology which has the support of absolutists also.

#### IV. INTELLECT AND INTUITION.

Bergson believes that intellect is inadequate to the grasp of reality. We need intuition for it. There are absolutists who are of the same opinion, who hold that intellect gives us the highest *knowledge* while intuition gives the *reality* of it. It is only by a rough usage that we call intuition also a kind of knowledge. For the intuitive knowledge of the absolutists is really the intellectual love where the distinctions of intellect cease to have any applicability. In intuition, the seer and the seen become one. This ineffable unity cannot be described. It is an experience beyond utterance. It



absorbs the soul, and as it does not give it an independence by which it can have an object, description, etc., become impossible. The individual is lost in the eternal essence, and intellect cannot do justice to the fulness and force of that experience. But absolutists generally take care to establish intellectually the reality of that experience. Were it unreal, art, science and morality will lose their significance. This all-comprehensive reality is the presupposition of all our existence. In one sense or other this intuitive experience is admitted by the absolutists from the thinkers of the Vedanta downwards. Plato, Plotinus, Dante, Spinoza, Hegel, Bradley and Bosanquet, adopt it in different ways. But no absolutist identifies it with the immediate data of sense. His intuition is not crude perception. It is the exercise of consciousness as a whole. It is mind penetrated by the heart, knowledge suffused by feeling, intellect transfigured by emotion. Intuitive experiences are the moments of deepest wisdom which give us glimpses into the ultimate essence of the whole which is the true and the real. It is always viewed as the perfection of our intellectual experience as the demand of intellect becomes a fulfilment in it. Intellectual stages will give us only arguments about it, and about; but they will be unilluminated. But in intuition the soul meets the real about which it hears and argues through intellect. In the light of this fulness of experience which is the goal of logic our intellectual knowledge looks relative and partial but not false. It alone is whole and absolute, where we have the identification of the knower with the known. In a sense this cannot be called knowledge, as the latter depends upon the existence of the dualism between the two. But the duality is also a unity, and this unitary aspect is emphasised in intuition. If there is anything that baffles intellectual apprehension, it is the whole and nothing else. Intuition is a kind of knowledge and a kind of life. Bergson makes it both, but in him it is more a kind of life. For in intuition the knower plunges into the flux of reality and knows that reality from within, by being one with it. It is knowledge that swims with the stream of life. Here truth is completely identified with reality. And this consciousness is not knowledge. As Bradley argues, truth when it becomes existential nullifies the distinction between the knower and the known on the basis of which knowledge develops. "Truth, while it is truth, differs from Reality, and if it ceased to be different would cease to be true" (*Truth and Reality*). But in the intuition of the absolutists, the knower no longer regards himself as a particular though he is that, as an existing knower in



dealing with others, but as the whole including himself. The whole point is that intuition with absolutists does not mean a break with our ordinary thought or an inversion of our rational procedure, but is only an expansion or completion of the labour of intellect, a grasp or comprehension which sees things as a whole. It is, as Wordsworth puts it, reason in its most exalted mood. It is knowledge of the whole or integral experience. As Kant says, the ultimate principles are only ideals to pure reason while to practical reason they are realities. Matters of faith are also ideas of necessary thought. Our intuitive beliefs are to be logically necessitated by our intellectual proofs. Intuition pure and simple is likely to land us in difficulties. No knowledge is possible if intellect is silenced. No intuitive experience can be the basis of a philosophical truth unless intellect endorses it. Without the aid of intellect intuition is not distinct from mystical gazing, and that is no substitute for philosophy. When Bergson makes intuition a kind of life, it becomes impossible of practice. We have true knowledge, he says, when we become one with the real, when the knower and the thing known become one. "By intuition," Bergson means, "that kind of intellectual sympathy by which one sets oneself in the interior of an object in order to coincide with the very reality of that object with its uniqueness, with that in it consequently which cannot be expressed" (*Introd. to Met.*). To know reality we must become reality. Intuition is an effort to dissolve into the whole. But how is this possible? How can we know anything else than our own consciousness? How can we become one with or assimilate the duration of the plant and the insect or a fellow-man or the world? How can we place ourselves in the moving currents of other objects? To know reality, the individuality or the concrete duration of reality must interpenetrate the being of the knower, but the possibility is, that, when it comes to consciousness, it gets fused with his own duration in one blended whole. And when we say that we know the object, we are either drawing upon our imagination or relying on intellect. If we are doing the former we are opening the floodgates to every form of mysticism, emotionalism and sentimentalism. The only chance for agreement among different intuitions seems to be *chance*. If two people have the same vision they may agree, but their experience will not be authoritative for others. We should somehow bring Bergson's intuition nearer intellect. It is not life but our knowing consciousness keeping in step with the rhythm of the duration of the object intuited. It is only if we make intuition intellectual, that there is any

chance for communicating our intuitions to others. Were it not intellectual, how can an individual who has felt the duration of his own life assume that the other people have the same experience? What is it that compels him to think that the essence of the world is of the same nature as his own consciousness? Intuition reveals to us only our inner life. How can we get from it a conception that shall embrace life as a whole? It has been the tendency of philosophers to make a part express the nature of the whole, and Bergson finds the nature of consciousness a perpetual unfolding or creation and so views the whole existence as a becoming. What is true of the most intimate depths of our inner life becomes the model according to which all other reality is represented. But Bergson cannot assume that the whole reality is of the same nature as the self. No intuition can give rise to this view. It must be due to thought. Thinking alone enables us to grasp the nature of everything else than our consciousness even, if we assume, for the sake of argument, that intuition can give us the nature of our inner life. Bergson admits this when he says, that "dialectic is necessary to put intuition to the proof, necessary also in order that intuition should break itself into concepts and so be propagated to other men" (*C.E.*, p. 251). Intuition is no good if it is not supported and supplemented by reason. When unguided by reason, it becomes instinct; when supported by it, it becomes creative and divine intuition. It will give us truths satisfactory to reason. Reason should sit in judgment over the findings of intuition and evaluate them. Absolute idealism has faith in the hidden harmonies of the universe, because they are to it matters of logical demonstration. The faith of absolute idealism is rational faith. Bergson consents to the co-operation between intellect and intuition. "It is impossible to have an intuition of reality, *i.e.*, an intellectual sympathy with its innermost nature unless its confidence has been won by long comradeship with its external manifestations." Again, "it is reality itself in the profoundest meaning of the word that we reach by the combined and progressive development of science and philosophy" (*C.E.*, p. 199). Bergson, in these passages, recognises that intuition need not throw overboard the results of intellect, but should only continue the work begun by intellect. "It is from intelligence that has come the push that has made it rise to the point it has reached" (p. 177). Here Bergson has not identified his intuition with uncriticised experience or untested feeling, but has clearly advocated a *rapprochement* between the two, science and philosophy. "Notwithstanding his high valua-

tion of intuition, he thought it should always be tested by verification, regarding intuition as a valuable guide-board, but one that, like other guide-boards, might point wrong" (quoted from Bergson's interview with Mr. Henry Holt, in Miller's *Bergson and Religion*, p. 79). We clearly see that Bergson's intuition is not emotional mysticism, but comes very near Spinoza's intellectual love or Kant's practical reason or Schilling's intellectual intuition. But still we cannot class Bergson with absolutists, as a different view of the relation between the two, intellect and intuition, runs throughout his writings. His distrust of intellect is so great that it is enough to make us pause before we venture to rank him as an absolute idealist in his view of this problem.

Though he comes very near the absolutist when he asserts that intellect gives us partial accounts of reality, still he breaks away from them when he holds that intellect does not touch reality at all. We have not much to choose between Bergson and the absolutists when he asserts that while both intellect and intuition give us knowledge of reality, one does it fully and perfectly while the other does it partially and imperfectly. St. Paul says, "We know in part" (1 Cor. xiii. 9). Bergson sometimes and the absolutist always holds to this doctrine. This is the only view that can make Bergson's philosophy logical and consistent. But the other view that intellect distorts and mutilates reality is the more prominent doctrine in Bergson and gives uniqueness to his system. He wants us to grasp reality without the intervention of intellectual formulas. We must take it by storm, seize it by a direct effort of introspection. We should catch reality on the wing without allowing reflection to settle on it and reduce it to a series of states. Intellect cannot grasp reality as it is. It can only arrest it, break it up, spatialise it and schematise it. Bergson agrees with the pragmatists in thinking that intellect is an instrument of action. It is valuable in the world of inert matter where mechanism reigns where there is nothing living, no individuality, no inwardness. It can describe well things at rest. When intellect tries to construct a picture of the universe, it gives us a skeleton of skin and bone and not a body of flesh and blood. Intellect misses the meaning of the whole and gives us relative, symbolic pictures. It gives us snapshots of life while intuition seizes its movement. It scratches only the surface of reality while intuition is needed to grasp its meaning. This view is due to an inadequate appreciation of the nature of reality as well as of intellectual activity.

Reality is looked upon by Bergson as a flow, a duration.

Intellect according to him can grasp only mobiles or differences. It cannot grasp duration but that which endures. It makes of reality, which is unceasing flow or pure duration, a static motionless appearance. If intellect attempts to deal with the real it ends by spatialising it. It mechanises mind. The flow of duration slips between its fingers, and in the place of the flow we have a series of juxtaposed concepts. We get for the perpetual flow, a set of immobile pictures. Reality as it is, is beyond the province of intellect. Philosophy must be intuitive while science may be intellectual. "If science is to extend action on things, and if we can act only with inert matter for instrument, science can and must continue to treat the living as it has treated the inert. But in doing so it must be understood that the further it penetrates the depths of life, the more symbolic, the more relative to the contingencies of action the knowledge it supplies to us becomes" (*C.E.*, pp. 198-199). Science treats of the immobile and the lifeless, but what is, is fluid and living. Philosophy dispenses with the symbols and knows the real. Science, according to the absolutist, is viewed as giving us partial and imperfect knowledge of reality, but according to Bergson it has no ontological significance at all. It is a product of fancy and imagination. "The philosopher must go further than the scientist. Making a clean sweep of everything that is only an imaginative symbol, he will see the material world melt back into a simple flux, a continuity of flowing, a becoming, and he will thus be prepared to discover real duration there where it is still more useful to find it, in the realm of life and consciousness" (*C.E.*, p. 369). There is an absolute distinction between intuition and intelligence, philosophy and science. On this view, the absolutist theory that intellect leads to intuition, science to philosophy, becomes a meaningless absurdity.

What is Bergson's distrust of intellect due to? Is he right in thinking that intellect can deal only with the static and the dead, the logical and the mathematical? As reality is looked upon by Bergson as vital and psychical in its nature, intellect, which is according to Bergson logical and mathematical, becomes abstract and subjective. Intellect becomes limited to the world of inert matter. Mechanical categories will not give the essence of life. Intellect becomes incapable of grasping reality as it is. If we assume that science is identical with mechanism, then this conclusion is inevitable; it requires supplementation by another, philosophy. To Bergson, intellect and science are mechanical. "Intuition and intellect represent two opposite directions of the work

of consciousness ; intuition goes in the very direction of life, intellect goes in the inverse direction " (*C.E.*, p. 267). But, following Hegel, we regard thought as including not only the Kantian categories of understanding but also those of ethical and æsthetic insight, and we shall find that intellect is adequate to interpret the whole of experience. Thought would then become an explication of the real.

Besides this Kantian intellect as confined to the categories of the understanding, the other fact that led Bergson to think that intellect was mechanical is the consideration that the intellectual man is pre-eminently a tool-making animal. As the animal consciousness has no control over matter and cannot make mechanical appliances, and as the intellectual man can do these things, it is inferred that intellect has been evolved to enable him to control matter and harness it to man's needs. Bergson admits that man is not only a tool-applying but also a tool-making animal. Intelligence is "the faculty of manufacturing artificial objects, especially tools to make tools". It is capable of "indefinitely varying the manufacture" (*C.E.*, p. 146). This means adaptation, or creative construction. Though the application of tools, symbols and concepts may be mechanical, still the making of them cannot be that. Even Mr. Lyndsay thinks that this account does not do justice to the nature of intellect. "The use of the machine may be mechanical but not its invention for that requires the insight of genius" (*Philosophy of Bergson*). Knowledge of the universal is an act of spirit, while its application may be a matter of routine. It is an act of spirit or intelligence higher than that of mechanical understanding. So when Bergson grants that by intellect man makes tools, he also grants that intellect is not mechanical. It then follows that for understanding life and its secrets, we do not require a process opposed to intellect.

By the cleavage his metaphysics makes between the world of matter and the world of life and mind, Bergson is led to distinguish between intellect and intuition. Life in nature is due to the *elan vital* pushing itself through matter. Matter is dead while life and consciousness are living. To live is to create and invent. Bergson believes that because intellect mechanises life it has to be overthrown, and we have to take for our pilots intuition and faith. But surely protests against the mechanisation of life do not amount to protests against the use of intellect ; for rationalist thinkers since the time of Plato have protested against the mechanisation of life and mind. Rationalism is not bound to treat the universe in such a dead and wooden way. Besides we have seen how

Bergson is wrong in thinking that life and matter are absolutely opposed, as they are only the lower and higher manifestations of spirit. In that case the opposition of thought to life breaks down. Continuity between life, and matter means continuity between intuition and intellect. Thought becomes only a progressive interpretation of experience. The logic of Bergson's argument requires us to postulate a continuity of spirit throughout reality, as matter, life, consciousness are only the slowly developing stages of the one spiritual ascent. Thought becomes adequate to its grasp. Intuition and mechanical understanding become the high and low aspects of a process, essentially the same throughout its stages. The philosophical or the intuitive point of view is that of absolute knowledge, and constitutes the highest kind of intellectual experience, while the mechanical view is the lowest.

Bergson thinks that intellect can deal only with abstract, repeating identities. As reality is concrete and ever creating differences, intellect must confess itself humbled in its presence. It can use words as tools or symbols. The application of these depends on repetition. Intellect can never grasp the individuality of the real, but can only reconstitute it, "with given and consequently stable elements" (*C.E.*, p. 173). Intellect is here reduced to a bare apprehension of identity. Prof. Bosanquet has subjected this doctrine to a careful examination (see *Logic*, vol. ii., on "A Defective Formulation of the Inductive Law of Reasoning"). He considers it incorrect to say that intellect is inadequate to the grasp of difference. As a matter of fact, intellect is inadequate to the grasping of mere identities. We can understand only an identity in difference. Bergson is wrong in thinking that intellect cannot deal with novelty. Psychology tells us that consciousness lapses when the same situation occurs again and again. The responding movement becomes automatic. It is only when a new situation arises, when the accustomed action is not adequate to it that consciousness appears on the scene. Then has intelligence to devise a fresh action and react to it. And Bergson admits all this when he says that the function of intellect is not merely to repeat a movement but to reply to a new need. He grants that intellect has a capacity to deal with novelties and changed situations. It is quibbling to argue that though intellect deals with novelties, it does so by way of rearranging old elements or regrouping given parts. It is hard to conceive that when intellect is confronted by a new situation what it does is to first break it to pieces, affiliate them all

with old elements and then apply set rules. Viewing varied and different situations in the light of universal principles is not a mechanical act where we break the given to pieces and then apply the calculating machine. It is an act of intelligence which is much more than a mere mechanical repetition. It is the act of binding together a manifold by means of an identity. It is replying to a new situation. It is the adaptation of response to stimulus. It is not routine repetition. The truth contained in Bergson's statement is that intellect cannot deal with mere difference but only with sameness in difference. But Bergson is wrong in thinking that it can deal with only absolute identities. Intellect will admit its insufficiency and confess its impotence in the presence of absolute difference as well as absolute sameness, but both these are unreal. What exists is an identity in difference. However much Bergson might protest against the description of reality or creative evolution as an identity in difference, our discussion of the relation of life to matter, and mechanism and teleology has revealed to us how Bergson is compelled to consider creative evolution as an identity in difference. If it is so, then, instead of intellect being inadequate to the grasp of reality or sameness in difference, it is only to its grasp that it is adequate. "So far from its being true that an organic unity is something that we cannot understand, it would be nearer the truth to say that we can understand nothing else" (Caird, *Philosophy of Kant*, vol. ii., p. 530). "All the charges of narrowness, hardness, meaninglessness which are so often directed against thought from the quarters of feeling and immediate perception, rest on the perverse assumption that thought acts only as a faculty of abstract identification" (Hegel, *Encyclopædia*, sec. 115, Wallace's translation). It is this abstract view of intellect that makes Bergson think that intellect deadens everything that comes within its paralysing influence. All this difficulty is due to a failure to appreciate the true nature of logical process and intellectual activity. Intellect is not merely repetitory but also constructive and creative. It can create novelties and understand novelties, for they are not only differences but also identities in differences. Creative genius in science, art and fiction is only the highest form of intellect. It is intellect viewed as constructive imagination.

Bergson argues that conceptual knowledge will not give us knowledge of the whole, though "we easily persuade ourselves that by setting concept by side of concept, we are reconstructing the whole of the object with its parts thus obtaining so to speak its intellectual equivalent . . ." (*Intro.*



to *Met.*, pp. 15-16). Bergson argues that if conception should seize the component parts of the objects, then the putting together of the concepts may perhaps result in the knowledge of the whole. But concepts give us only partial views, expressions or notations, and not real parts. If concepts should give us real parts, we could fit them into the whole and acquire the total vision, but what can we do with a mere notation or a scheme of symbols? Intellect "substitutes for the interpenetration of real terms the juxtaposition of their symbols" (T. & F.W.P., I. 34). We cannot reproduce continuity by adding concepts to concepts. But this whole criticism is due to a confusion between the symbol and the object symbolised. Bergson argues that logic which deals with static concepts cannot give us knowledge of reality which is flow. But does Bergson really believe that in the material world these concepts give us the realities themselves? If in the world of life and duration they do not give us realities, even so do they not give us realities in the world of matter. So they must be inadequate there also. But if they will suffice in the world of matter they must suffice in the vital world also. It is the function of a sign to signify, but for this it need not resemble or reproduce the thing signified. If this function of intellect is admitted as Bergson admits it when he considers the concepts to be valid in the world of matter, then it follows that intellect is good right through, in logic and mathematics, in biology and psychology also. But if we mistake its function, then it becomes bad all through, notwithstanding Bergson. The whole fallacy is due to the confusion of the sign with the thing signified, a relation of symbols with a symbolised relation.

"Created by life, how can intellect embrace life, of which it is only an emanation or aspect?" If intellect cannot grasp life because it is evolved by it, then the faculties which can grasp it, must be something not evolved by it. But is Bergson prepared to say that intuition has not been evolved by life? If intuition is also a product of life, how can it enable us to grasp life of which it is an emanation?

What, then, is the good of scientific knowledge which is untrue to reality? It is of practical utility. For practical purposes we conceptualise reality and spatialise spirit. So the world of our everyday life is only an appearance and not reality. We cannot agree with Bergson in thinking that intellectual knowledge is knowledge of an unreality. Granting that intellect can only grasp matter, is not matter real? It is the inverse movement of life and so even though life is



not grasped by intellect, its inverse is apprehended by it. All that Bergson's contention comes to is this: while reality in its fulness cannot be grasped by intellect, still parts of reality can be known by it. Intellectual knowledge has ontological value; only the whole of reality baffles it. Intellect does not deal with unrels but with partial reals. It may be argued that even matter is duration provided we re-attach it to the whole to which it belongs. Duration according to Bergson should be predicated of the material systems which science isolates, "provided such systems are reintegrated to the whole". Parts cut off from the whole are abstract; they have to be fitted up into the whole to become real. It is the task of science to bind parts to parts in wholes. So intuition which is supposed to give another kind of knowledge is only intellect more thorough and radical than what it would be when it deals with parts. If the scientific method is pursued to its end, we get the philosophic view. Bergson admits this when he says, "The more physics advances the more it effaces the individuality of bodies and even of the particles into which the scientific imagination breaks by decomposing them: bodies and corpuscles tend to dissolve into universal interaction" (*C.E.*, p. 188). "Already in the field of physics itself, the scientists who are pushing the study of their science furthest . . . tend to place themselves in the concrete duration" (p. 369). Certainly, then, the philosophical point of view is not opposed to that of science. The philosophic method is just the scientific method carried on more vigorously. Intuition is not opposed to intellect, but is only intellect at its best. Intellect at its lower stages deals with parts and is called scientific; at its higher stages it deals with the whole and is called intuition.

That there is a higher capacity than understanding which enables us to grasp the concrete whole in its wholeness is admitted by most philosophers at the present day. The question is only about the nature of that capacity. Bergson considers it to be more perceptual than conceptual. To him knowledge of reality as it is, in its individuality and concreteness, can only be perceptual. It cannot be conceptual to Bergson who views conceptual knowledge in an abstract and unreal manner. But we are afraid that it cannot be even perceptual. For with him perception is occupied with the object as a number of features assembled. The sense organs by their selective activity break up the object; "Our eye perceives the features of the living being, merely as assembled, not as mutually organised. The intention of life, the simple movement that runs through the lives, that binds them

together and gives them significance escapes it" (*C.E.*, p. 186). So intuition which should be synthetic cannot be perceptual it cannot be conceptual. What else is it? Bergson tells us it is integral knowledge which makes a whole of abstract relations discovered by intellect and the thinghood grasped by instinct. Intuition combines the fruits of instinct and intellect. Instinct deals with things and intellect with relations. Instinct has direct contact with reality. It is moulded on the very form of life. If questioned it would give up life's secret. But this is purely an assumption. Why should we think that instinct is adapted to life? Life is full of novelty, contingency and unforeseeability, and instinct has none of these features. How, then, can it give us the secret of life? Instinct is automatic and stationary while life is mobile and progressive. How can we fathom life the mobile and the progressive by an appeal to instinct the immobile and stereotyped? If Bergson is correct in thinking that instinct is moulded on the very form of life, then we should say that life is a machine as instinct is. If life is novelty then instinct will not help us in the matter of life. But to Bergson instinct has direct contact with reality, only being undifferentiated it does not seek reality as a whole. Intellect on the one hand seeks reality as a whole, but by itself is not able to grasp it. Intuition is instinct become self-conscious, or intellect become disinterested. Intuition is the disinterested knowledge of the object in its wholeness. "If there is a means of comprehending a reality absolutely instead of knowing it relatively, of entering into the object instead of selecting points of view over against it, of having an intuition of it instead of making analysis of it, in short, of grasping it independently of any expression and any translation or symbolic representation; that is metaphysics itself, and this metaphysical knowledge can be had only in intuition. "An Absolute can only be given in our intuition" (*Introd. to Met.*). Instinct rises to intuition with the aid of intelligence. "Without intelligence, it would have remained in the form of instinct, riveted to the special object of its practical interests and turned outward by it into movements of locomotion" (p. 178). With intelligence it becomes integral knowledge. Intuition is neither perceptual nor conceptual but a combination of both; it is neither instinctive nor intellectual but a combination of both. It is something like artistic perception which the soul, freed from practical necessities, has. It is æsthetic feeling. "That an effort of this kind is not impossible, is proved by the existence in man of an æsthetic faculty along with normal perception" (p. 186).

It is æsthetic intuition that can catch hold of the continuity of life. But this æsthetic feeling springs out of reason. The greatest works of art are the most rational and involve a good deal of training (*C.E.*, p. 7). It is true that before the work is finished it could not have been foreseen. But this failure to foresee is not incompatible with reason. The new creation is a unique synthesis of given elements. Though we know the product will be rational, we are not therefore able to say beforehand in what way the rationality will express itself. There are so many ways of being rational. When Bergson compares intuition to the creative genius of the poet or the artist's vision or the trained instinct of a literary writer who synthesises in the desired form the mass of material collected by him, it comes very near reason and intelligence. There are positive descriptions of this philosophical intuition which clearly bring out its intellectual affinities. Bergson compares it to the creative vision of the scientist. The scientist when he perceives the working of the universal in the particular grasps reality as it is in its individuality and this is intuitive or integral knowledge. When Bergson claims that we owe to this faculty all the greatest discoveries of sciences, when he tells us that in every system of philosophy we have facts which are vivified by intuition (*C.E.*, p. 251), when he puts it to us that a successful practice of intuition requires previous study and assimilation of a multitude of abstract data, we feel that his intuition is not much different from our scientific imagination. It is nothing mysterious. Dr. Carr, the best-known interpreter of Bergson in England, describes it thus, "it is the most common and unmistakable fact, and that we only fail to recognise it, because it is so absolutely simple that it requires a strong effort to turn the mind from its intellectual bent in order to get this non-intellectual vision" (*The Philosophy of Change*). But it is not non-intellectual vision but a vision in which abstract analysis is at its lowest. It is creative imagination (*M. and M.*, p. 76). Bergson is not a supporter of mysticism which goes against intellect, for he says: "If by mysticism be meant (as it almost always is nowadays) a reaction against positive science, the doctrine I defend is in the end only a protest against mysticism" (quoted in Lyndsay, *Philosophy of Bergson*, p. 19). Bergson is not willing to identify it with mystical experience. It is a kind of intellectualism. To quote Bergson himself, "there are two kinds of intellectualism, the true which lives its ideas; and a false intellectualism, which immobilises moving ideas into solidified concepts to play with them like counters" (*ibid.*, p. 19). Were intuition completely

extra-intellectual, then it becomes a subjective affection and cannot pretend to be a philosophic method. But the whole of this long discussion indicates that in Bergson intuition is both the necessary condition of psychical activity as scientific hypothesis is, and the summit of the work of thought as the philosophic vision of the whole is.

We may here note the remarkable fact that following the absolutist tradition and in opposition to the empirical tradition, Bergson holds that practicality and action are opposed to the attainment of the higher level of insight and intuition. To become metaphysical we must cease to be practical. This may well be in the words of Plato or Plotinus. Pluralists and romanticists preach that in practice we come across reality, and all speculation is the source of illusion. The search after truth requires, according to the absolutist tradition, freedom from maya or detachment from the illusions of ignorance and selfishness. It means only that in the world of practice we are absorbed by the details and have not the detachment for catching the universal. To gain an insight into the mysteries of the universe we require periods of contemplation. In meditation we become conscious of the inner nature of freedom. Freedom alone can comprehend freedom. In intuition we have a direct vision of reality, life envisaging itself. The detachment necessary for it is emphasised when we are asked to turn away from the world of practice and abstract reasoning. But the products of meditative insight vindicate themselves at the bar of reason. Bergson employs the absolutist device when he proves the inadequacy of intellect by pointing to the deadlocks and contradictions in which the exclusive use of intellect lands us. Bergson asks, "would the idea ever have occurred to us to doubt the absolute value of our knowledge, if philosophy had not shown us what contradictions our speculation meets, what deadlocks it ends in?" (*C.E.*, *Introd.*, pp. xi-xii). The logical inference from this fact is that if parts with which intellect deals set themselves up for the whole, then antinomies arise to point the moral that they are parts and not whole.

When all is said and done, Bergson's conclusion comes to this, that there are aspects of reality which our understanding cannot comprehend. Bradley, the greatest living absolutist, tells us that there are problems which are inexplicable and insoluble, for example the relation of a finite centre of experience to other centres and the whole. To him a universe which would reveal its secret essence to a finite understanding would be a poor substitute for the actual one. "The

complete experience which would supplement our ideas and make them perfect is in detail beyond our understanding" (*Truth and Reality*). Intellect should be supplemented by the other sides of consciousness if it should reach its end. Man's whole consciousness is needed to feel the central reality. There is more than logic in life. But philosophy simply points out the logical necessity of a whole which is of the nature of a concrete universal. There philosophy ends and intuition fulfils that experience. For this experience man has to raise himself above the narrow, practical and utilitarian point of view and see life as it is. But this does not mean that practicality and action are opposed to truth and knowledge. It only means that we have to lift our souls above the business of life to find out its hidden secrets. In that experience we free ourselves from the trammels of abstract ratiocination; we have there an evanescence of the intellectual activity.

#### V. GOD.

Bergson's account of God is once again a struggle between his logical and empirical tendencies. His logic requires him to make his God an impersonal principle from which both matter and life spring. It is not to be identified with the life current, for it is the spring of both life and matter. "I speak of God as of the source whence issue successively, by an effect of his freedom, the currents or impulses each of which will make a world; he therefore remains distinct from them, and it is not of him that we can say that most often it turns aside or it is at the mercy of the materiality that it has been bound to adopt" (*Bergson*, Paul and Ruhe, pp. 43-44). God is not the *elan* but the ultimate transcendent. He is not an immanent principle but a transcendent cause. There is not much to choose between Bergson's transcendent cause and Spinoza's substance. Bergson ends in either deism or pantheism. If Bergson says that this transcendent principle is of the nature of becoming and not being, it is a matter of opinion unsupported by argument. But the empirical tendency has to be satisfied. He wants to give a God which is utterly good and not the whole which contains both good and evil. So he tells us that the life current which is utterly good but is not able to gain its end on account of the obstructive principle of evil, though not the Absolute still is the finite God which alone can satisfy the popular demands of religion. It "need not be held responsible for evil" (*C.E.*, p. 255). Sometimes Bergson holds that the interaction between the

two, life and matter, is the central reality and so God. God then becomes the unfinished universe and with it he is ever growing. But the two prominent notions are those of the absolute or the whole and the life current. It is the same old trouble between the absolute of logic and philosophy and the God of ethics and religion. As the popular consciousness wants a personal God, Bergson is prepared to grant personality, and make the primal source a person. While he recognises the difficulty of giving any positive conclusion about the original unity (see *Bergson*, Paul and Ruhe, p. 44), still he allows himself the privilege of characterising it as personal. "This source of life is undoubtedly spiritual. Is it personal? Probably. Of course, personal in a different way without all those accidental traits which in our minds form parts of personality and which are bound up with the existence of the body. But personal in a larger sense of the term—a spiritual unity expressing itself in the creative process of evolution" (Dr. Louis Levine's interview with Bergson, *N.Y. Times*, 22nd Feb., 1914). But God must be personal in the accepted sense of the term. M. Le Roy, the famous French interpreter of Bergson, referring to Bergson's idea of God, says, "We cannot regard the source of our life otherwise than as personal. We cannot regard Him as impersonal. We seek in Him our personality. God is personal in that He is the source of our personality." I ask whether this conception of God is different from that of the absolutist's. Even in their scheme God is the source of our personality, and if that be sufficient argument, they too can regard God as personal.

Fully aware of the conflict between absolute idealism and orthodox theism, Bergson tries hard to be on the side of orthodox religion. But when he holds that God can be realised only by a transcending of human conditions, when he identifies religion and philosophy, when he insists upon the inadequacy of intellect and the need of intuition to grasp the whole, and when he swings between God as the whole and God as part, namely, the *elan vital*, he is quite like the absolutists.

## VI. THE INDIVIDUAL SELF AND FREEDOM.

The account of the individual which Bergson gives is not different from that given by the absolutists. The soul is a product of the world being. Its destiny is to be reabsorbed into the whole as the mist from the ocean must slip back into the shining sea. Only the absolute can be supposed to

be completely real. Man is only attempting to become perfectly real. When man completely surrenders his lower nature, then he becomes divine. The distinction between God and man is not one of kind but one of degree. Bergson holds to a fundamental identity between the two; but, unlike the absolutists, he makes God also a being who struggles with matter. Identity of nature alone can render possible free communion between man and God. Both Bergson and the absolutists agree in thinking that the whole alone is real, that the individual is partially real, and that for him to attain his goal the resisting matter will have to be overcome, and that when the individual becomes dissolved in the whole then he becomes one with it and his life-end realised.

The individuals of the world are free when they escape from the mechanism of habit and routine. The individual is free in so far as he maintains his true nature as spirit, and absolutism also tells us that man is free in so far as he acts from his higher nature. Man is free as he is a unique expression of God. "Life in the material world participates in the liberty" of the original impulsion. So long as we are human this freedom can only be partially realised as we have to struggle against the inertia of matter. When we become the principle of life in its purity we are absolutely free.

The objection repeatedly urged against absolutism that it gives freedom to God or the whole and not to man holds against Bergson's philosophy also. Bergson establishes the existence of an underlying spiritual principle beneath the particular manifestations of life. The one *elan vital* runs through all the divergent lines of evolution. In *Time and Free-will* Bergson emphatically asserts the freedom of the individual who freely acts on matter. But as with the absolutists this is only a derived freedom; for the individual, when cut off from the universal activity of life, is an unreality. Look at the following passage which might well be from Spinoza or Hegel: "Life, as a whole, from the initial impulsion that thrust it into the world, will appear as a wave which rises . . . this rising wave is consciousness . . . on flows the current, running through human generations, subdividing itself into individuals. Thus souls . . . are nothing else than the little rills into which the great river of life divides itself, flowing through the body of humanity." The individual is a particular manifestation of the universal life and his position is not a whit better because Bergson substitutes for the material system of the scientist and the universal mind of the absolutist the dynamical life. What the man in the street wants is the freedom of the individual in



his own right as a separately existing entity and Bergson has not granted him that.

Our conclusion is that Bergson's point of view so eloquently set forth is not a system but only a philosophic vision. Bergson is more a prophet than a philosopher, more a seer than a dialectician. His vision requires for its basis and support a system of absolute idealism.

### III.—PROFESSOR JOHN COOK WILSON.

BY H. A. PRICHARD.

THE death of John Cook Wilson, Wykeham Professor of Logic in Oxford since 1889, is a serious loss for Philosophy. How great the loss is can only be appreciated in Oxford, where, following the natural bent of his mind, he devoted his indefatigable energy to teaching rather than to writing, and to those who knew him best the feeling of loss is increased by the sense of what he might have done had the circumstances of his life been different, and even had he been granted a few more years in which to carry out to completion the results of his later reflection.

The following summary of his life is condensed from a notice by Mr. H. B. W. Joseph in vol. vii. of the Proceedings of the British Academy, to which the reader is also referred for a sketch of his philosophy.

Born in 1849, the only son of a Methodist minister, Cook Wilson went from Derby Grammar School to Balliol in 1868. There he read both Classics and Mathematics, and obtained a First Class in each, both in Moderations and in the Final Examination. In 1873 he became Fellow of Oriel and remained so until in 1901 he migrated to New College. While studying in Germany he came under the influence of Lotze, and at the same time he made the acquaintance of his future wife, Charlotte Schneider, whom he married in 1876. Mrs. Wilson's health failed for many years, and this threw on him a severe burden of daily nursing and household duty. Not long after her death in 1914, the mischief which proved fatal to him declared itself, and he only survived his wife some eighteen months. His small tale of published matter included a pamphlet "On Military Cycling or Amenities of Controversy" (1889), and another of 145 pages "On the interpretation of Plato's *Timaeus*" (1886), which arose out of what he considered an insufficient reply by the author to his review of R. D. Archer Hind's edition of the *Timaeus*. Besides these writings Cook Wilson published separately only his *Aristotelian Studies I*, on the structure of chapters i.-x. of the 7th Book of the *Nichomachean Ethics* (1879), his inaugural lecture

on "An Evolutionist Theory of Axioms" (1889), memoirs of the Revd. T. W. Fowle (1903) and of D. B. Monro, Provost of Oriel (1907), and a book on the *Traversing of Geometrical Figures* (1905). He, however, contributed fairly constantly to learned periodicals, such as the *Classical Review*, the *Classical Quarterly*, the *Journal of Philology*, the *Academy*, the *Transactions of the Oxford Philological Society*, the *Archiv für Geschichte der griechischen Philosophie* and the *Philologische Rundschau*. These papers were chiefly on the problems of text, interpretation, or doctrine in Plato and Aristotle. He also prepared papers for the British Academy on universals, and on the good will, but neither was completed nor presented.

He was singularly human—appreciative of the simpler pleasures, generous, warm tempered but easily appeased, and resentful of anything he thought unjust.<sup>1</sup> Unselfish, affectionate, and loyal almost to a fault, he had a great capacity for friendship with people of all ages and many different kinds. A friend writes of him: 'He was a delightful holiday companion and a careful, enthusiastic, and energetic guide to good scenery, and to other good things as well. . . . At times he would show a most boyish vigour, walk, climb, and run with the best; at the age of sixty he bathed on a sudden impulse in an ice-cold tarn on the snow level in Switzerland, and he could be on his legs for hours with a total disregard of food. . . . One needed to be no logician to perceive how acute were his powers of thought, though sometimes it seemed as if he were using a finely tempered instrument on an unworthy subject. For instance, in order to show that an incoherency of plot did not necessarily prove the *Iliad* to be the product of more than one author, he had apparently read through a vast quantity of contemporary literature, novels, detective stories, and the like, to discover logical flaws, loose threads, and inconsistencies. . . . A first-rate scholar in the technical sense he undoubtedly was; certainly no narrow specialist; and if the diversity of his interests was in some respects a hindrance to him, it was in other ways part of his strength, and typical of the strength, as it seems to one outside the University, of Oxford as opposed to other schools of learning.'

To speak of him dispassionately as a philosopher is difficult for one who, like the present writer, enjoyed uninterrupted intercourse with him since he first became his pupil some five and twenty years ago. His equipment was such as only

<sup>1</sup>The retributive theory of punishment was among his favourite doctrines.

one or two in a generation can hope for. He was at once a good mathematician and a good scholar; an intensive study in his earlier years of the great philosophers, and especially of Plato and Aristotle, gave him a first-rate knowledge of them, which formed a vital though unobtrusive background for his own inquiries. He had what may be described as a great feeling for facts. His mind was independent, cautious, and intensely acute. Thus equipped he seemed one of the few who are capable of doing work of that rare kind which is done once for all. And yet, though Professor for twenty-six years, without official duties of a practical kind to distract him, he published nothing constructive.

The explanation of this failure, which to many of his friends seemed tragic, lies in a combination of facts. First and foremost, no doubt, stood the hindrance of his wife's ill-health, which in the end wore him out. But it is not clear that even without this his achievements would have matched his capacities. The multiplicity of his interests were a continual source of distraction. A chance statement to which he objected, say on Greek music, or on the *ὑποζώματα* of Greek ships, would set him researching, and once this process had begun, no one could say when it would stop. One problem would lead to another, and all critical problems were to him equally fascinating. He had a passion for detail; he found it difficult to leave a problem until he had exhausted it in all its bearings (his thoroughness often put a severe strain on his audience); and a hatred of error in all forms made it difficult for him to allow any statement to which he objected to pass without dealing faithfully with it—always provided that he considered the author worthy of notice.

Again, his most obvious strength lay in criticism. "What showed itself to me," writes Prof. J. Å. Smith, "was chiefly a persistent and penetrating acuteness in tracing out the springs of error so that one came away from a discussion in which he led, with a mind swept clear of cobwebs and prepared afresh for the reception of the truth in the matter. That was what I feel I gained in the way of education by contact with him. Above all he helped to disentangle one's feet from the snares of verbal expression and so to set free one's mind for reconsideration of the topic in hand."

Undoubtedly his sense of the many pitfalls to which philosophers are exposed grew on him. "Be comforted," he once wrote to a depressed student. "Philosophic thinking is always a great struggle. It is, I am sure, far harder than any other, and I don't suppose there is any other subject in which long and determined thought may be so apparently unrewarded.

It is full of disappointments. An investigation carried on perseveringly for a long time may end in the discovery of a fact of consciousness which upsets the theory so laboriously worked out. The utmost gain one has seems to be that one has found out what will *not* do. Now this is a gain, but one is not at once prepared for the new effort which it suggests. The trouble is that one feels life is so short, but philosophy seems very much longer." He considered writing on philosophy, when young, mere presumption, and cleverness a snare, while the comment to be expected from him on a modern book was that from lack of reflection the writer had in the first few pages unwittingly committed himself to a theory which vitiated the whole book.

Moreover, when, as he said, he began to think things out again for himself from the beginning, he found himself led in a direction very different not only from the tendencies of the schools in which he had been educated but also from those of his contemporaries. This made him increasingly anxious to avoid committing himself, not only until he was sure of his ground, but also until he felt that he could put his view in a form which would compel conviction.

He had, too, a growing fear of the petrifying effect of publication. "There is a greater danger," he wrote, "of fixing one's thoughts by publication and arresting one's own progress than is generally recognised. I have often noticed that quite able thinkers have the greatest reluctance in retracting anything to which they have committed themselves by publication though the mistake may be perfectly obvious to the critic (whose work is incomparably the easier). But the (printed) letter killeth, and it is extraordinary how it will prevent the acutest from exercising their wonted clearness of vision.

"I hope, by my present method,<sup>1</sup> to gain that greater clearness which is usually the result of printing for others to read, and at the same time to preserve the comparative freedom one enjoys as long as one's thoughts are only in manuscript. I hope, also, it will enable me at least—for I dare not count on more—to remain nearly as amenable to reason as if I had printed nothing."

It is therefore not surprising that he threw his energy mainly into teaching. Contact with other minds gave him the stimulus and sympathy he needed, and the relation of master to pupil gave him the necessary freedom to develop his own views in his own way. As a teacher he was in some ways unsurpassed. To those whom he thought genuine

<sup>1</sup> *I.e.*, of printing privately portions of his lectures on logic.

students he was more than generous with help and encouragement, grudging neither time nor trouble in dealing with their difficulties. He was not indeed a prophet with a gospel, unless the conviction that above all things one must not let oneself be put off with shams has a right to the title. His lectures, too, though not unrelieved by humour, were apt to be abstract and rather dry (his habitual use of symbols, supported by illustrations though they were, was trying); and he was only seen at his best in his informal discussions, in which he cast aside reserve, and his audience could watch the working of his mind at close quarters. But his acuteness was a revelation. There was infection in his conviction that the truth was a matter of high importance, that slovenly and confused thinking was a crime, and that words and phrases were a snare to great and small alike. (Technical terms such as 'ideation,' 'reproduction,' 'cognition,' were to him simply obstacles to thought, and he was a living illustration of his view that the truths of philosophy can be expressed in simple language.) It was difficult, too, to come away from one of his discussions without feeling that for the moment at least one had acquired a better mind and learned something of the way in which a problem should be tackled.

Of his success as an interpreter of the historical philosophers estimates would probably differ. His interpretations, though never hasty, were nothing if not confident, and liable to be extreme. To me they appeared characterised by an almost uncanny power of following the working of the author's mind. The problem before the author was treated as a living one, to be considered in itself, in order that the first essential, the precise form in which it presented itself to the author, might be revealed. "What would a man," he used to say, "in such and such an attitude naturally ask himself?" Whether the subject was an obscure passage in Aristotle's *Metaphysics*, or a portion of Kant's *Critique*, a certain directness of interpretation was conspicuous, due to the conviction that however obscure the language, the facts referred to were comparatively familiar. And he was far too conscious of men's liability to hold different views in different contexts to expect an impossible standard of consistency.

To give an outline of his philosophy is not easy. The only systematic exposition of his views is to be found in his Logic lectures (parts of which were eventually printed privately, chiefly because the material had expanded beyond the limit of a year's course). These lectures were, in sections, constantly and increasingly being rewritten, and in their present form consist of several strata, of which the earlier plainly

require revision, and the latest suggests that the phase last reached was essentially one of transition. Moreover, study of this material suggests that Cook Wilson's plan of confining himself to lectures was, even from his own standpoint, not without its disadvantages. No one could have attached more importance to preciseness of statement, but the consciousness that he was not writing for publication seems to have led him at times to exact too little of himself in this respect, and although no one who knew him could think his meaning anything but clear to him, the necessity of meeting objections to which publication would have given rise, would have enabled him to make clearer to others not only his special views but also the way in which they held together. The fact was that he disliked criticism, not, I think, from unwillingness to stand by his conclusions, but from distaste for controversy, and from the conviction that the answer to criticism, where not due to misunderstanding, would chiefly consist in retraversing old ground in the way of prolegomena on which his mind was made up, and for the rediscussion of which life was too short.

The point of departure of Cook Wilson's views lay in his unwavering conviction of the truth of mathematics. In mathematics we have, without real possibility of question, an instance of knowledge; we are certain, we *know*. Those who talk of non-Euclidean spaces are using mere words to which no thought corresponds. It is impossible to conceive hyperbolic or elliptic space. The fundamental objection which confronts those who suppose themselves able to conceive such spaces lies in the fact that the corresponding figures contradict our faculty of construction; we cannot, for instance, imagine straight the so-called straight lines of which they speak, and to suppose, as they do, that this does not matter is erroneous and due to an illusion about the function of imagination in geometry. They can be refuted on their own ground, since it can be shown that they use only the conception of *Euclidean* space in the hypothetical reasoning in which their theories about such spaces consist, and it is a mere mistake to suppose that a train of hypothetical argument will never lead to a contradiction of a certain kind, because up to a given point it has not done so.

In consequence the scepticism inherent in the philosophy of those who follow the metageometricians was wholly alien to him.<sup>1</sup> The coherence theory of truth, again, was, accord-

<sup>1</sup> At one time he thought of devoting himself to publishing a refutation of the paradoxes of Mr. Bertrand Russell. He considered that they were based on verbal fallacies, *e.g.*, that the paralogism that the class of classes



ing to him, not only impotent to lead to any positive result but was vitiated from the start by the existence of mathematics, where we presuppose that no future experience and no further advance either in mathematics itself or in other departments of knowledge can contradict the knowledge which we already have. (He was fond of insisting that in that reasoning which is knowing we presuppose that the knowledge which constitutes the premises cannot be modified, in the sense of contradicted, by any future experience.) Equally alien to him was the position represented in Mr. Bradley's *Appearance and Reality*. Neither knowledge nor reality admitted of degrees. Reflection on our experience may and does give rise to puzzles in plenty, but the result is not to show that our fundamental notions about the world are inherently self-contradictory; where such contradictions are alleged, the cause lies in some fallacy, usually simple, in which we have been unconsciously involved. On the contrary, space, time, bodies, minds (and when we reflect we see that we really do know what we mean by these terms) are real and in no sense 'appearance'. In fact, his outlook might be described as essentially 'objective'. No student who followed and accepted the workings of his mind would expect the study of philosophy to transform his unreflective view of the world into something unrecognisably different. It was the business of philosophy to study the presuppositions of the sciences, but the man of science had no need to fear that as a result, the sciences would be shown to be illusion or even to require revision in detail. Philosophy could add to the knowledge which was science by contributing the solution of its own problems, but it could not destroy or interfere with scientific knowledge.

A criticism of the chapter on Relation and Quality in *Appearance and Reality*, entitled 'On a supposed infinite process caused by relating the relation between two terms to the terms of the relations themselves,' is so typical of Cook Wilson's method of handling problems that the substance of it is worth giving. After asserting that Mr. Bradley falls into a merely verbal fallacy, owing to the use of abstract terms without inquiring into their meaning in a given context or testing them by examples, he argues thus:—

Let A and B be the terms of a relation and  $R_1$  the relation between them.  $R_1$ , it is contended, since it is different from A, will stand in a relation to A. Let  $R_2$  be this relation. Similarly  $R_1$  will stand in a relation  $R_3$  to B. Thus, besides

is a member of itself, arose from speaking of the class of classes as a class. (See Mr. Joseph's article already cited.)

the original term A and B, and the original relation  $R_1$ , we have two new somethings, *viz.*, two new relations  $R_2$  and  $R_3$ , and the original relation  $R_1$  has itself become one of the terms of a relation. Again, since  $R_2$  is different from A and  $R_1$ , we similarly get two new relations, *viz.*, the relations in which  $R_2$  stands to A and  $R_1$ . This process is infinite and yields an infinite series with terms all different from one another.

It is evident that only the first step of the argument need be considered, since it is this step which necessitates the others.

The presupposition of the argument is that if two somethings differ from one another, they must stand in relations which are different from either, or, more fully, in relations not identical with or included in the separate nature of either; that is to say, that if X is different from Y, there is a relation  $R_1$  of X to Y which is not identical with either X or Y, or a part of what is already understood in X or Y.

Now this presupposition is not always true even where the two somethings are not a relation and one of its terms; it can, for instance, be shown to be untrue where the two somethings are a solid and its surface. But it is *never* true where the two somethings are respectively a relation and one of its terms.

For consider a case where A has a relation  $R_1$  to B different both from A and from B, *e.g.*, where A is equal to B. What we have to do is to ask ourselves *what*, if there be such a thing at all, the relation of  $R_1$  to A, *viz.*,  $R_2$ , must be. Mr. Bradley never raises this question but contents himself with speaking of this relation in general as existing. As soon as we ask ourselves this question, we detect a fallacy. For  $R_2$ , if there be such a relation, must be a new relation, though of course only discoverable from the given character of A and  $R_1$ . Hence the judgment ' $R_2$  is the relation of  $R_1$  to A' must be a new judgment and not part of the original judgment ' $R_1$  is the relation of A to B'; and the question 'what is  $R_2$ ?' *i.e.*, 'what is the relation of  $R_1$  to A?' must be a real question, and must not merely present the verbal form of a question. An unreal question is a question which contains everything necessary to its own answer and which, therefore, puts as a question what cannot be a question to the person asking it, and so implies a contradiction between the verbal form and the matter to which it is applied. Now it is easy to see that in this case the question is unreal and that there is no new judgment. To do so we have only to consider what answers can be given to the question. The original judgment is 'A is equal to B', and the relation of A to B

would be said to be equality. The question, then, is 'what is the relation of this relation of equality to A?' Only two replies, differing in completeness, are possible: (1) We may reply that 'the relation of equality to A is that it (equality) is the relation of A to B,' or, more accurately, 'the kind of relation which A has to B'. Here equality is not the equality of A to B, but the universal of it, *i.e.*, equality in general; and the answer about the relation in which  $R_1$  stands to A is simply a statement of what kind (*viz.*, R) the relation  $R_1$  is. Thus we have not gone outside the nature of  $R_1$  itself and not reached any new relation  $R_2$ . (2) We may give a more complete reply, which uses all the information given in the question. Speaking strictly, the relation of A to B is not equality in general but the particular instance of equality which is the equality of A to B. And if with this fact in view we ask what is the relation to A of A's equality to B, we can only reply that 'the relation to A of A's equality to B is that it is A's equality to B'. Thus here again we have not advanced beyond  $R_1$  to any new relation  $R_2$ , nor have we advanced beyond the original judgment, *viz.*, that  $R_1$  is the relation of A to B. It follows, therefore, that it is meaningless to speak of a relation  $R_2$  of A to  $R_1$  different from both.

From his conviction of the truth of mathematics, in which we advance step by step and by consideration of the special problem in hand, combined with an acute appreciation of differences of all kinds, there arose what may not unfairly be called the first principle of Cook Wilson's philosophy, the principle that there is no first principle. There is no doctrine of Aristotle with which he was more in agreement than that of the existence of *ἴδια ἀρχαί*. (Although his sympathies were with Plato, the cast of his mind and his aporetic methods showed that his real affinities lay with Aristotle.) He was never tired of insisting on the impossibility of general criteria; there was and could be no criterion of knowledge, no criterion of beauty, no criterion of morality. Aristotle was right in maintaining that *ἀγαθά* differed *ἢ ἀγαθά*. The key to special problems lay in consideration of their special subject matter.<sup>1</sup> Doubtless general preliminary inquiries of a logical or metaphysical nature (*e.g.*, on the 'logic' of relations) were often necessary, but these were required to clear away

<sup>1</sup>The existence of God, he once argued in a paper, the delivery of which occupied nearly three hours, was not a matter of proof but was presupposed by the existence of the specific emotion of reverence.

obstacles likely to bar the way to proper appreciation of the problem.

On the other hand he would have repudiated the notion that the knowability of single facts by themselves or the existence of ultimate or irresolvable differences was inconsistent with the unity of reality; he would have argued that it only showed that reality had not that unity which some philosophers expected it to have, and that it was impossible to lay down *a priori* what the unity must be. In this connexion it may be noted that the modern metaphysical criticism of the view, implicit in ordinary thought and explicit in Aristotle and Locke, that what are called things or substances are complete and independent realities seemed to him to err by overstatement. It is true, he argued, that things, *i.e.*, bodies and minds, as standing in relations to one another, may be rightly held to be elements in a wider reality which would be the one absolutely independent reality and that these relations must be regarded as included in the complete being of these things; but, nevertheless, these things have a nature of their own, not at all constituted by these relations in which they stand to other things or substances and in fact presupposed by these relations; this nature of the things, therefore, is not constituted by their being elements in the larger unity to which their relations conduct. In this way, he thought, the true independence of the thing is vindicated against the overstatement of its dependence, and the ordinary view is shown not to be a mere fallacy.

From this attitude it was but a short, though important, step to the view which in one application or another was most characteristic of Cook Wilson in his later years, *viz.*, that much which is ultimate in our experience is in itself fully intelligible to us and that the difficulties which we feel about such realities only arise because we treat them as if they were, or try to express them in terms of, or try to explain them by, something else. To be intelligible is not the same as to be explicable. It is possible for a thing to be intelligible without being explicable, for it may be intelligible in itself and without reference to anything else; or, if the word explanation is to be retained, a thing may be its own explanation.

This view, he became convinced, holds good first and foremost in the case of knowledge itself; it applies also to space, to time, to the distinction of the discrete and the continuous, and to that of universal and particular, the difficulties about which, in the Parmenides and elsewhere, all arise from treating the universal as if it were another particular, as is

done in modern philosophy when it is maintained that there is a universal of universals.<sup>1</sup> It also applies, he thought, to various forms of unity. "A reality, whether a thing or not, may be a unity which unites in itself different aspects or elements; not something over and above them, which has them, but their unified existence. . . .

"The difficulty we raise about the notion of 'subject' [*sc.* of attributes] is really a difficulty about this unity, and we are puzzled merely because we think of the unity in the abstract. How a diversity can form a unity, or how a unity must be the unity of diverse elements in one whole, depends on the particular instance. Thus we see that a volume must have a surface, and that a surface can only exist as the surface of a volume, and it seems that we also see exactly what the nature of this unity is, and that no mysterious something outside the elements themselves is required to modify them."

Of the truth of such views he may not always have succeeded in convincing others, but he was certainly not prone to maintain of any particular thing that it was intelligible in itself without prolonged consideration. On such a matter he was no more hasty to commit himself than on anything else. Thus although for years he had given special thought to the subject of perception and seemed more and more convinced that perception should be included among such intelligibles, he would not definitely commit himself.

Probably it was his growing conviction that if the categories underlying our experience were to be understood, they must be understood through themselves, which gave rise to the chief characteristic of his last years, *viz.*, his insistence on the necessity of a full and patient analysis of what we exactly mean by such terms as mechanism, cause, force, life,<sup>2</sup> before we make any attempt to criticise our right to use such terms.

In his early days Cook Wilson accepted the idealism then dominant. "By the real or the objective," he maintained in a lecture dated 1880, "we can only mean that which is completely object of thought. But that which is object of thought must conform to every law of being an object of thought, that is to every law of thinking. Thus the laws of the nature

<sup>1</sup> Cook Wilson considered the modern representation of the individual as a universal because it is a unity in the diversity of its qualities 'a notable example of loose thinking'. His view was that the unity of the universal in its particulars is totally different from the unity of the individual as a unity of its attributes.

<sup>2</sup> Two of his notebooks are devoted to a minute analysis of what we mean by 'living thing'.

of the subject are the laws of the nature of the object. Therefore, whatever is necessary for our thought must be a universal objective truth, and therefore the antithesis between thought and its object is overcome."

It was long before he moved from this position. The considerations which seem eventually to have influenced him are given in a letter written in 1904. "In all investigation of knowing and willing there is a certain illusion to which we are liable. Whereas we have to do with the relation of subject and object, we try to express and explain various aspects of this relation in our ordinary categories which are all of the relation of object and object. The only remedy is to look into the nature of the thing before us *where we are certain of it* and see if it really admits of such categories. . . . If we think of knowing as an activity, as doing something, then as if we had to do with relations of objects we require a something to which something is done and a something in it which is done—in fact, as one object in causal activity produces a change in another object, we think that the knowing subject must in knowing do something to the object it knows and that that object must suffer something. Now we must know something about knowledge, and when we reflect we know that the very idea of it is incompatible with any such *action* upon, or *suffering* in, the object known. You can no more act upon the object in knowing than you can 'please the Dean and Chapter by stroking the dome of St. Paul's'. The man who first discovered that equable curvature meant equal distance from a point, did not suppose that he had 'produced' the truth—that absolutely contradicts the idea of truth—nor had he changed the nature of the circle or curvature or of the straight line or of anything spatial. Nor does any one else suppose so. Obviously if we 'do anything to' anything in knowing, it is not done to the object known. If we persist in trying to find something done to the object, we are simply using categories applicable to the relation of object to object, and not applicable to the relation of subject and object, and must fall into all manner of fallacies.

"Now representation is only another form of the same fallacy. We want to explain knowing an object and we explain it solely in terms of the object known, doing so by giving to the mind not the object but some idea of it which is said to be like it—an image (however the fact may be disguised). The chief fallacy of this is not so much the impossibility of knowing that the image is like the object or that there is any object at all, but that it assumes the very thing it is intended to explain. The image itself has still to

be *apprehended*, and the difficulty is only repeated. We still distinguish the image and the knowing, or perceiving, or apprehending, it. The theory which is to explain subjective apprehension of the object cannot, as one could predict, do anything but presuppose the absolute ultimate fact of apprehension of an object and so explain apprehension of the object (unconsciously) as apprehending another object like it. Obviously neither can apprehension be explained in terms of the object apprehended, nor the object in terms of apprehension. In a way the distinction is not only ultimate but of extreme simplicity—nothing can make it clearer than itself. It is 'simple' because we absolutely must always presuppose it to know anything or doubt anything or to think about our knowing anything. Perhaps most fallacies in the theory of knowledge are reduced to the primary one of trying to *explain* the nature of knowing or apprehending. We cannot *construct knowing*—the act of apprehending—out of any elements. I remember quite early in my philosophic reflection having an instinctive aversion to the very expression 'theory of knowledge'. I felt the words themselves suggested a fallacy—an utterly fallacious inquiry, though I was not anxious to proclaim it. I felt that if we don't know what knowledge is we know nothing and there can be no help for us. I feel sure many most respectable theories commit the fallacy of supposing that the presupposition of all explanation can be explained. What on earth is gained by 'construction' or 'reconstruction' over 'representation'? When you have made your construction you still have to *apprehend* it! It is no good—knowledge and apprehension can only be described in terms which already mean knowledge and apprehension. Is it not true that just as those who consciously or disguisedly hold a representative theory are leaving out apprehension altogether and substituting another object for it, so the idealist constructors or reconstructors are either leaving out the object and substituting for it the activity of perceiving it—this I think is their general tendency—or merely like the others constructing something which is an object but still requires apprehension: object on the one hand without apprehension, apprehension on the other hand without object?"

There is, however, no doubt that he only abandoned the current idealism with extreme hesitation, and without emphasis. At the date of the letter cited he still considered the view that idealism has an erroneous origin in the attempt to explain the relation of apprehension to what is apprehended to be compatible with the metaphysical view that the unity



of all reality, the unity of which every particular thing is a manifestation, is an apprehending unity. And for years he continued to hold that logic and science should be distinguished as dealing respectively with the subjective and with the objective side of thought. His hesitation seems to have been due partly to the conviction that it was first necessary to be satisfied about the nature of hypothetical thinking and partly to the fear that unless we maintain that what we apprehend is *part* of the apprehension, we find ourselves abstracting what we apprehend from the apprehension, and then the act of apprehension becomes empty and meaningless. Eventually, however, he overcame this fear by an analysis of the problem as regards relations generally. From this analysis certain sentences may be quoted. "We have, then, here [*sc.* in the case of a collision of two bodies A and B] a case where a relation, though empty and meaningless if we abstract from it the terms related, is so far from necessitating their inclusion in itself that it necessitates the contrary; for it necessitates that these terms must have a being of their own which is not included in the being of the relation. This seems enough to show that the inseparableness of the apprehension from what is apprehended does not warrant the conclusion which it seemed to suggest. The truth is that just as the collision with B is only possible through a being of B other than its coming into collision, and it is with B as having such being that the collision takes place, so also the apprehension of an object is only possible through a being of the object other than its being apprehended, and it is this being, no part itself of the apprehending thought, which is what is apprehended. Thus, if an object is apprehended, it does not follow that merely because it is apprehended it must be part of the nature of the apprehension, part of the apprehending consciousness, which would make it entirely mental or in general a state of consciousness."

The central feature of Cook Wilson's logical doctrine is best indicated through the criticism to which he latterly subjected the very existence of a 'theory of judgment'.

Every one is agreed, he held, that that with which logic, as distinct from other subjects, has to do is thinking, but apart from difficulties caused by idealism, this view involves the difficulty of determining what is and what is not to be included under 'thinking'. What is called thinking always has to do with knowing, but while some knowing, *viz.*, reasoning, must be called thinking, some knowing would not be called thinking; for perception, or at least some perception, is naturally called knowing. Again, while some thinking,

*viz.*, reasoning, is knowing, some thinking is not. Thus the formation of opinion and of belief, though based on knowledge, is not knowing. *A fortiori* the activity of inquiring or wondering, although called thinking, is not knowing.

What is common to the forms of thinking is simply that they are activities of consciousness (in the wider sense of the word in which it does not mean consciousness of some object but includes willing and desiring), but these forms are *not* further unified under a differentiation of this universal into a definite specific form of activity of consciousness of which thinking would be the name; in other words, there can be no definition of thinking, since there is no common quality peculiar to the forms of thinking as thinking. What unifies the forms of thinking which are not knowing with those which are knowing and with one another lies in their several relations to knowing, relations depending in each case on the peculiar nature of the form of thinking in question, *sui generis*, and intelligible and only intelligible by considering the particular case. And it is solely through their relations to knowing—which is in itself intelligible—that the forms of thinking can be understood. Thus, wondering is wondering what is true, *i.e.*, what can be known about something. Further in explanation we cannot go, for the inquiring attitude is unique, cannot be expressed in terms of anything else, and is its own explanation.

The idea of logic as the study of thinking, therefore, leads us to apprehension in general as the primary subject of investigation. This will include that apprehension which is perceptive as well as that which is not, since the knowledge which wondering and the formation of opinion presuppose as desired may be such as has to be supplied by perception. Then will follow the other forms of thinking.

Unfortunately, however, logic has in fact taken quite a different direction, as is shown by the traditional division of the subject into the theory of judgment and the theory of inference. The idea of a theory of judgment originates thus: The study of inference, historically the first and chief centre of interest, at once leads to the idea of apprehensions not obtained by inference (since otherwise there would be an unending process). These apprehensions are called propositions or judgments, modern logic preferring the latter term because of the association of the former with the verbal statement. Now if the words 'proposition' and 'inference' were confined to such apprehensions, and if the theory of judgment meant the study of them as such, the division into the theory of judgment and the theory of inference would be justifiable

and would lead to the idea of a study of apprehension in general, whether inferential or not, as the first object of study, this study being preliminary to the study of inference. But the theory of judgment is not so conceived and the terminology is not so restricted. This comes about as follows:—

In any statement we must distinguish what it means from what it expresses, in an understood and restricted sense of 'express'. 'Glass is elastic' would often be said to be the *expression* of the knowledge or opinion of the person pronouncing it, but it does not *mean* anything about anybody's knowledge or opinion; it professes to describe an objective fact and that is its sole meaning. Now the knowledge gained by inference is stated in a verbal form which signifies the nature of the thing known and that only—not the nature of our apprehension of it. And the statement of the fact, omitting, as it often does, the grounds of it discovered in the inference, suppresses all traces of the process. This promotes the fallacious habit of representing the mental activity corresponding to it, *i.e.*, the apprehension of the fact, as a result distinct from the reasoning process by which the fact is apprehended. Hence arises the fiction of a kind of activity called judgment as something distinct from inference, whereas really if anything here is to be called judgment, it is precisely the inferring itself. Further, the fictitious sense of judgment is taken to include opinion and belief, since the verbal form used in expressing knowledge, opinion, and belief is the same and describes the nature of what we know or think existent, with complete abstraction of the fact that it is for us matter of knowledge, or of opinion, or of belief.

Three fallacies are thus involved in the familiar distinction between judgment and inference:—

- (1) Knowledge, whether inferential or not, opinion, and belief are all regarded as forms of the same sort of activity.
- (2) The term judgment, which has a quite legitimate meaning, is taken to designate this fictitious activity.
- (3) This activity called judgment is held to be different from inference and is made the subject of a separate inquiry.

The confusion is concealed by the fact that the verbal expression is made to do duty for this fictitious activity, and what purports to be a logic of judgment is in fact, though quite unconsciously, only a logic of statement. Consequently in the so-called theory of judgment inquiry is sometimes directed to what the verbal form signifies and sometimes to the verbal form itself. In the former case the result consists

in abstractions which are metaphysical and not logical, as belonging to objective reality and not to our apprehension of it—*e.g.*, the distinction of subject and attribute in the treatment of the syllogism. ('No wonder,' Cook Wilson remarked, 'that in some modern philosophies logic is indistinguishable from metaphysic.') In the latter case we find (1) abstractions which belong to grammar, associated with logical and metaphysical abstractions, *e.g.*, in the theory of the connotation and denotation of terms, and (2) fallacies such as the view that all universal propositions are hypothetical, due to failure to see that the questions under consideration are purely questions of the meaning of certain forms of speech.

There is a further defect in representing what is really a study of the general forms of statement as a theory of 'judgment'. The word 'judgment,' being taken from ordinary usage, ought in logic to retain what is essential in its ordinary meaning. To judge is to decide; it implies previous indecision, a previous thinking process in which we are in doubt. 'Judgment,' then, in logic should mean decision on evidence after deliberation. Consequently it is not merely that opinion and belief are not entitled to be called judgment; the term judgment should not even be used as a general term to cover those of the activities of thinking which are apprehension or knowledge. For in perception there are many apprehensions, often in logic called judgments, which involve no previous doubt, as when, if I see black letters on white, I apprehend that the letters are black and the paper white.

The moral which anyone trying to follow Cook Wilson's thought would have expected, and indeed desired, him to draw, is surely that the whole structure of logic should be recast, the 'theory of judgment' being abolished, both name and thing. We should have expected an analysis, first of the various forms of knowledge, and then of the inferior activities of thinking such as the formation of opinion and belief, exhibited in relation to knowledge and to one another; and the term judgment would appear (if at all) only as a name for one particular form of apprehension, *viz.*, that which is judgment in its ordinary sense. In this way we might hope to get a logic in vital relation to the facts, freed from technical terms, and, above all, freed from the fallacies inherent in the supposed existence of a 'theory of judgment'.

Yet we find no such recasting, but instead only a discussion of the usual topics covered by the so-called 'theory of judgment,' based on the full recognition that they constitute only a logic of statement. Probably the re-orientation came too late for Cook Wilson to effect the necessary changes, but

possibly also he would have justified the retention of the ordinary structure of the subject on the ground that as the forms of statement were common to the various forms of thinking, it was only possible to approach the latter through the former.

Of his views in detail it is only possible to select characteristic specimens<sup>1</sup>:—

(1) Opinion involves reasoning. In opinion we know that certain facts are in favour of A's being B, and either at least that they do not prove it, or that there are facts against A's being B. The opinion itself, however, is not the knowing which constitutes the estimate of the evidence but the result of it, and is a peculiar thing for which we can use no term which belongs to knowing.

Belief is not judgment, for, like opinion, belief involves uncertainty, so that the belief that A is B is not the decision that A is B, although it may involve the practical decision to act as if A were B. Belief, rather, is akin to opinion, and the difference, which appears to be one of degree, is not one of superior certainty, for certainty does not admit of degrees. In general we risk more on a belief rather than on an opinion; yet when we believe that A is B, although we may take the practical decision to act as if it were true in a certain practical issue, we should refrain from taking other practical decisions which we should take if we *knew* that A is B. Corresponding to these different degrees of practical importance in our decisions in the case of different opinions and beliefs, there is a varying degree of feeling of confidence. This is *sui generis*, and we are recognising its true positive nature by thus distinguishing it from that with which it might be confounded. Such confidence is not an attitude which we take towards what we know. To a high degree of it, where it exists, is attached the word belief. It is an ultimate and irreducible feeling, frequently influenced by our wishes or fears.

With this feeling of confidence is associated a fallacy often illustrated in the treatment of probability by its mathematical measure, and in argument from statistics. The feeling depends in part at least on what we call the strength of the evidence. But evidence, however strong, cannot influence reality, and in the feeling of increased confidence which accompanies increased strength of the evidence we are unconsciously treating the strength of the evidence as if it could influence reality.

<sup>1</sup> It is impossible in the space available to give a fair idea of his view on hypothetical thinking, a subject to which he devoted a special course of lectures.

(2) As to error, the existence of deception and mistake, and therefore of error proper, is not provided for by the existence of opinion. For, although an opinion may be untrue, the holder of a false opinion is not, strictly speaking, deceived or mistaken. On the other hand, the hypothesis that there can be false judgment, in the proper sense of 'judgment,' is untenable, since it would involve that we never could be sure, as we are sure, that any 'demonstration' was knowledge. Error, however, *i.e.*, deception in the full sense, does exist. The clue to the difficulty lies in the existence of certain forms of consciousness which simulate judgment. Thus, to illustrate one of these forms, we may see a person whom, as we say, 'we mistake for an acquaintance,' and without hesitation perform some act which it would be a liberty to take with anyone but an acquaintance. Here the term 'perception' is excluded, and so also are the terms 'judgment,' 'opinion,' and 'belief,' since when we perceive the familiar characteristics of our friend, it never enters into our heads that they could belong to anyone else—we do not think about that at all. The most adequate expression for our attitude is that 'we were under the impression that the person we saw was our friend'. The fact is that such an attitude eludes our efforts to express its character, because it is not clear thinking, and thus not an activity of the fully-awakened consciousness, and yet we try to express it as if it were. It can only be expressed in terms peculiar to itself.

(3) With regard to the relation of conception to judgment, it is true that the judgment,<sup>1</sup> in which, as such, we apprehend a unity of different elements of reality, is the unit of thought. For an element of reality which is simple, in the sense that elements cannot be distinguished within it of which it is the unity, is at the same time *in its own nature* related to other elements and must therefore be apprehended as an element in a whole, *i.e.*, as an element apprehended in a judgment. Nevertheless, we can make a legitimate distinction analogous to the ordinary usage of the terms 'conception' and 'judgment,' by calling apprehensions of such simple elements conceptions, in distinction from judgments as the apprehensions of what is complex—provided we remember that the former apprehensions are only possible as elements in the latter. These conceptions, sometimes called simple conceptions, are true in the same sense as judgments are true. For the simple conceptions which are said to be abstracted from

<sup>1</sup> The section of the lectures from which this paragraph is summarised was written prior to Cook Wilson's final strictures on the use of the term 'judgment'.

experience, *e.g.*, the conception of colour, are apprehensions in experience of reality. On the other hand, those simple conceptions, like that of cause or necessity, which are said not to be given in experience, although they are not apprehensions of something experienced, are apprehensions of what is necessitated by the reality which is apprehended in experience, and therefore of what must itself be real as belonging to the reality apprehended in experience.

We incline to treat the latter or *a priori* conceptions, since their objects are not themselves experienced, as primarily necessities of thought, and then find it difficult to explain why there should be a corresponding object in experience. But such apprehensions are not so much necessary apprehensions as apprehensions of a necessity, this being all that a necessary apprehension should mean, and the use of the term '*a priori*' here, although it has some justification, is misleading, since it implies a divorce between experience and thought which cannot be overcome.

(4) The use of the terms subject and predicate has been the source of serious confusion in logic. The distinction implicit in the usual definition of the terms is that the subject of a statement is the object of which we were thinking as known or conceived before the information given about it in the statement, while the predicate is the being asserted in the statement to belong to the object but not comprised in what before the statement was conceived to belong to the object. Although here subject and predicate are objects, yet this distinction is entirely founded on our apprehension of them; it lies not in their objective nature but solely in their relation to our subjective attitude of apprehension or opinion. This distinction finds no expression in the statement itself, since it forms no part of the meaning of the words, and it is only indicated by the accent placed on certain words when the statement is spoken.

With this distinction is habitually confused the distinction between A and B in the form 'A is B,' to which it is held all statements should be reduced and to which corresponds the objective distinction between subject and attribute. This is especially manifest in the usual treatment of the theory of the syllogism. This distinction of subject and predicate is also confused with an objective relation in the language often used about the relation of universal and particular, as when it is said that Plato's problem in his theory of ideas was to account for the predication of the universal (which is one) of many particulars.

(5) Inference is a way of judging or forming an opinion.



In that inference which is certain and constitutes knowledge (through which the imperfect types have to be understood) we apprehend that one element of reality (which may be simple or complex) necessitates another. (Kant's synthetic judgments *a priori*, though not called inferences, are similar to such inferences.) The possibility of such necessitation can be understood only in particular instances and admits of no general account.

The object of the syllogistic logic was to discover the general forms of demonstrative argument. To achieve this object in its generality, its authors worked out the kinds of argument depending on what they considered the mere form of the propositions constituting the premises, and so applicable to any kind of subject-matter. Consequently they only formulated the kinds of argument possible within the category of 'subject' and 'predicate,' *i.e.*, really, of subject and attribute. Their method was not one of analysis of actual arguments but was *a priori* and constructive, and in fact exactly parallel to the procedure of a mathematical science; and the resulting determination of the rules and figures of the syllogism is no part of logic proper but a science, in the sense in which pure mathematics is a science, and deals with the relations of subject and attribute.

In geometry advance always presupposes the drawing or imagining of a particular figure, and consists in making new constructions of which, and of the consequences of which, we immediately apprehend the validity. When the right construction is found the proof is complete. The addition of a chain of argument such as we find in Euclid is unnecessary; and though it enables us to expound the proof to others, the best way to do this is to retrace the process of discovery. The apprehension of an axiom differs from a demonstration only in the greater simplicity of the construction.

Cook Wilson also used to subject to a searching examination Mr. Bradley's theory of judgment. The argument is too long and complicated for reproduction, but in outline his main contentions were as follows:—

(1) Both the distinction between the 'psychological idea,' *i.e.*, a mental image, *e.g.*, of a particular horse, and the 'logical idea,' or 'ideal content,' *e.g.*, horseness, which is held to be the 'meaning' of the 'psychological idea,' and also the theory built upon this distinction, depend on an erroneous analysis of such terms as 'sign,' 'symbol,' and 'meaning'.

(2) Mr. Bradley's account of 'sign' and 'meaning' really describes an act of abstraction, and has nothing to do with sign or meaning.

(3) By 'ideal content' or 'logical idea' can only be meant either the reality meant by the 'psychological idea,' *e.g.*, horseness, or, if an 'ideal' meaning *has* to be found for it, the meaningfulness of the psychological idea, *i.e.*, its property of having a meaning.

(4) In Mr. Bradley's definition of judgment as the act which refers an ideal content recognised as such to a reality beyond the act, 'refer' must in the end simply mean 'judge'. Further, in this definition, if 'ideal content' means the reality meant, then the definition only amounts to saying that in the judgment 'A is B' we judge that the reality A has the reality B-ness; while, if 'ideal content' is taken in the other sense in order to preserve the 'ideal' character of ideal content, as somehow distinguished from reality, the definition is obviously untrue.

(5) The theory is grounded on the same principle as the old-fashioned copying idea theory, which dates from Aristotle, *viz.*, that it is our ideas which are true or false, according as they do or do not agree with, *i.e.*, copy, reality, and judgment is true or false because it somehow involves ideas. Mr. Bradley in effect substitutes 'meaning' for 'copying,' by an impossible use of 'meaning'—an idea 'standing for' or 'meaning' existence. But, apart from the new difficulties introduced by the change, the new theory does not even avoid the fundamental difficulty inherent in the old theory, *viz.*, that the possession of an idea is useless unless we know it to be like the reality, and that to know this we must already know the reality and so have no need of the idea. For in just the same way the fact that the 'psychological idea' stands for a reality is useless unless we know this fact, and to know this we must already know the reality and so have no need of the 'meaning idea'.

No summary could do justice to Cook Wilson. Certainly this summary does not. Even his notebooks would, to those who did not know him, give but an inadequate idea of the amount of thought which lay behind even the simplest and most obvious looking of his statements. Those who knew him will probably agree that his outstanding characteristic was his power of going to the root of a matter—a power which in criticism showed itself in the way in which, by concentrating on essentials and especially on the main presuppositions of a view, he would in a few sentences develop objections, which, if valid at all, destroyed the whole position. For his friends the dominant feeling will be regret that it was only towards the close of his life that he really seemed to find himself, and that then it was too late.

#### IV.—ON THE NATURE OF JUDGMENT.

BY DOROTHY WRINCH.

IN putting forward this theory of judgment, my aim is not to offer criticism of Mr. Russell's theory of judgment, nor yet to estimate its plausibility; I rather wish to offer suggestions as to the ways in which his idea for dealing with judgments of the form "*aRb*" can be extended so as to enable us to deal with more complicated judgments. Although I shall not be able to claim that I have dealt exhaustively with the various developments of which the idea that judgment is a multiple relation is capable—I shall try, at any rate, to refer to the various classes of possibilities which suggest themselves. I shall not attempt in this paper to give any answer to the question as to the truth of the theory: I am only going to try to show how it might be made to work. Whether or not the theory can be made to work (quite apart from whether or not the theory is true), depends, I hope to show, on various rather obscure questions. I shall content myself with showing that the answers given to these questions do determine the workableness of the theory, and I shall not attempt at present to investigate the answers to them in any serious spirit.

But, in case, some may feel that the propositional theory of judgment as a dual relation is fairly satisfactory, and that any other theory is so far unnecessary and without interest, may I suggest that in making up a theory to fit certain facts, if all the relevant facts are included, then there are none left by means of which one can judge between different theories, each of which fits in with all the given facts. There is no reason, I think, to believe that there is only one theory which can satisfactorily account for a certain group of facts. In view of this, it seems to me of interest to investigate how far this theory of judgment could be made satisfactory even if one is satisfied to some extent with some other theory, though one's unsatisfied desire if no suitable theory of judgment has been found would doubtless lend a stronger interest to this inquiry.

This theory is very complicated—and I must confess this at the outset, but may I put in a plea that it may not be regarded merely for that reason, as unsuitable? It is quite conceivable that judgment is a very complicated phenomenon, and I must insist on the fact that the simplicity of a system is no important ground in its favour.

I will pass over the various arguments which may be brought up against the propositional theory of judgment. Arguments are adduced in Mr. Russell's essay in which he introduces his theory.

First of all we will consider the theory that judgment is a multiple relation in the case of simple judgments such as "*a* loves *b*,"

" $\phi(ab)$ ".

The theory is that the belief complex in this case is of the form

1.1                      " $J(I, \phi, a, b)$ ".

If we had more arguments as, for example, in the judgment "*a* is between *b* and *c*" we should have " $J(I, \phi, a, b, c)$ ," and generally " $J(I, \phi, a_1, a_2, a_3 \dots a_n)$ ". Now I must state explicitly that this relation *J* is such that the arguments cannot be interchanged freely. In general " $J(I, \phi, a, b)$ " does not imply " $J(I, \phi, b, a)$ ". I put in this very obvious point because the criticism is sometimes advanced that on this theory "I believe that *a* loves *b*" cannot be distinguished from "I believe that *b* loves *a*". *J* is in a perfectly precise sense not symmetrical: thus we can clearly distinguish

"I believe that *a* loves *b*," *i.e.*, " $J(I, \phi, a, b)$ "

from

"I believe that *b* loves *a*," *i.e.*, " $J(I, \phi, b, a)$ ".

We can now treat molecular propositions and propositions such as  $p = q$ ,  $p \vee q$ ,  $p \cdot q$ , *etc.*,<sup>1</sup> but I will confine myself to those molecular propositions whose constituent propositions are elementary propositions, *i.e.*, propositions with no apparent variables. Suppose we take "If he comes, I will go," *i.e.*, " $\phi a = \psi b$ ". Trying an extension of the method for treating  $\phi a$  we will put

2.1                      " $J(I, \phi, a, \psi, b)$ ".

This very obviously is unsatisfactory for "he comes or I will go" would be equally well represented. Now a problem faces us—we cannot have the proposition as a unity; not even  $\phi a$  nor  $\psi b$  may come in. Yet we must be able to distinguish ways of combining the constituents  $\phi$ ,  $a$ ,  $\psi$ ,  $b$ . My

<sup>1</sup> *I.e.*, *p* implies *q*, *p* or *q*, *p* and *q*, *etc.*

first suggestion is that the *form* of the proposition be introduced.

A form seems to be an expression with blank spaces. Each of the spaces is guarded by one type so that only arguments of certain types can be put in certain spaces. Thus we have, *e.g.*, "— — —" or " $xRy$ ". Now there are various ways of *operating* on forms. The easiest is to put constants into the empty places. Thus we could fill up "— — —" into " $a$  loves  $b$ ". This process I call the process of evaluating and the operator by which one evaluates a form an evaluator. Thus, if  $f(xy)$  represents a form and  $\chi(ab)$ , *e.g.*, the proposition " $a$  is greater than  $b$ "

$$E' f(xy) = \chi(ab).$$

$$\begin{array}{l} x = a \\ y = b \\ f = \chi \end{array}$$

Now returning to our problem of expressing the judgment that

$$"\phi a = \psi b"$$

we have

$$\phi a = \psi b = E' \begin{array}{l} x = a \quad f = \phi \\ y = b \quad g = \psi \end{array} f x = g y$$

Thus we can take as the judgment complex

$$2\cdot2 \quad "J(I, E, \begin{array}{l} x = a \quad f = \phi \\ y = b \quad g = \psi \end{array} f x = g x)".$$

One further elaboration I want to suggest, *viz.*,

$$2\cdot3 \quad "J(I, E, \begin{array}{l} x = a \quad f = \phi \\ y = b \quad g = \psi \end{array} f x = g y, \phi, a, \psi, b)".$$

Between 2·2 and 2·3 I have no arguments to offer. There is, however, one consideration. Sometimes one feels a desire for uniformity in the various parts of a theory, and it may seem more suitable that the simple propositions  $\phi(ab)$  should have a uniform form with molecular propositions. In that case, I put forward to supplement 1·1

$$2\cdot2 \quad "J(I, E, f(xy)), \quad 1\cdot3 \quad "J(I, E, fxy, \phi, a, b)".$$

$$2\cdot3 \quad \begin{array}{l} x = a \\ y = b \\ f = \phi \end{array} \quad \begin{array}{l} x = a \\ y = b \\ f = \phi \end{array}$$

Then, again, I have no arguments between these two possibilities. This argument of uniformity has, I think, little cogency, and I therefore offer these modifications very tentatively.

Now I wish to suggest a way of treating apparent variable propositions with this theory. Apparent variable propositions are such propositions as

"There is a man walking down the street."

"All boys like sweets."

"There is not one poet whom everybody admires."

We will take the easiest case.

"Someone is ill."

We will try to get the complex as before

3.1  $J(I, \phi)$

Now this does not distinguish "Someone is ill" from  
 $(x) \cdot \phi x$

"Everybody is ill".

I therefore wish to introduce another operator. I call it P and the operation may be called that of "particularising" a form. Correlative to P we introduce G which performs the operation of "generalising".

Then

$G\phi x = (x) \cdot \phi x =$  for every  $x$ ,  $\phi x$  is true.

$P\phi x = (\exists x) \cdot \phi x =$  there is some  $x$ , for which  $\phi x$  is true.

P and G can operate on forms or on partially completed forms, but obviously not on completed forms which are, of course, propositions. Thus we can take

$(\exists x) \cdot \phi x = P\phi x$  or  $PE\phi x$

Further possibilities for the belief complex now suggest themselves

3.2  $J(I, P_x, \phi x)$

3.3  $J(I, P_x E, f x)$

3.4  $J(I, P_x E, f x, \phi)$

Between these I again have no arguments to offer. Again the argument of simplicity might perhaps be introduced in favour of  $J(I, P_x, \phi x)$  or the desire for uniformity might lead one to adapt the form of the complex to the one decided on in case 2.

We will now take a slightly more complicated judgment involving apparent variables. "There is something to the right of  $b$ "

$(\exists x) \cdot \phi(xb)$ .

We will again try various forms. It is clear that the proposition is of the form

$P_x \phi(xb)$  or  $PE_x f(xy)$

We therefore try

4.1  $J(I, P, \phi, b)$

4.2  $J(I, P_x, \phi(xb))$

4.3  $J(I, PE, f(xy))$

4.4  $J(I, P_x E, f(xy), \phi, b)$

Now suppose we try to express the judgment complex for  $(\exists x) \cdot \phi(xb)$ , the first form will not differentiate it and so is clearly unsatisfactory, and, once again, there seem to me no arguments except those of simplicity and uniformity to help one to decide between 4·2, 4·3, and 4·4.

I will take one more example, to show how one seems to be forced to introduce the form of the proposition into the judgment complex. Take the judgment "there is someone who is ill and sad"

$$\begin{aligned} (\exists x) \cdot \phi x \cdot \psi x &= P_x^c \phi x \cdot \psi x \\ &= PE^c \underset{\substack{x \cdot f = \phi \\ g = \psi}}{f x \cdot g x} \end{aligned}$$

so as the complex we will consider

- 5·1 "J(I, P<sub>x</sub>,  $\phi$ ,  $\psi$ )"
- 5·2 "J(I, P<sub>x</sub>,  $\phi x \cdot \psi x$ )"
- 5·3 "J(I, P E,  $f x \cdot g x$ )"
- 5·4 "J(I, P<sub>x</sub> E,  $f x \cdot g x, \phi, \psi$ )"
- $\begin{matrix} f = \phi \\ g = \psi \\ f = \phi \\ g = \psi \end{matrix}$

The first is unsuitable on the face of it, for  $(\exists x) \cdot \phi x \supset \psi x$  would be the same. We are then left with three alternatives as before.

But here, I must remark that it might be possible to introduce still further operators to distinguish the logical product of  $\exists x \cdot \phi x \cdot \psi x$  from the implication. But, this possibility I will not discuss, except to say that it might work in such a simple judgment as this. I will therefore put in the possibility

- 6·1 "J(I, H<sub>P</sub>,  $\phi, \psi$ )" for " $(\exists x) \cdot \phi x \cdot \psi x$ "

as a typical instance of how possibly the form may be deleted.

Having given the bare outlines of the theory, I will now try to show on what questions it depends, whether my suggestions are workable. I must point out again that in the simple cases of elementary propositions discussed by Mr. Russell, the question of the introduction of the form does not assume the importance it has assumed in my extension of the theory, and since it is round this question of the introduction of the form that most of the important criticism centres, it is my extension of the theory rather than Mr. Russell's theory that is in question, although a development such as I have suggested seems to me inevitable if one begins with the idea of judgment as a multiple relation.

Now an essential part of the theory rests on the possibility of correlating certain spaces with one evaluation or with one particularisation or generalisation. For take the forms



$“fx . gy . xHy”$   
 $“fx . gy . yHx”$ .

These are different. One would give us, after certain operations “There is a rose to the left of a daisy,” *i.e.*,

$“(\exists x, y) . \phi x . \psi y . xLy,”$

the other, for example, might give “There is a rose which has a daisy to the left of it,” *i.e.*,  $“(\exists x, y) . \phi x . \psi x . yLx”$ . Thus we must be able to correlate the spaces together in different ways, if the employment of a form is to be at all possible. The question whether such a correlation is justified is a different question, and as it appears to me a difficult and obscure one. But the fact remains that such a procedure is essential to the theory. Having pointed out this question, and having shown that it is necessary for my purposes that this procedure should be justified, I leave the further discussion of the point.

However a larger, less subtle but more dangerous objection can be raised. In introducing the form as a unity in the judgment complex—as is done in some of the suggestions, is one not perhaps falling into the very same mistake—if it be a mistake—of imagining that propositions are unities? Is there any justification for introducing a form, which embodies the logical structure of the proposition, when one has refused to introduce the proposition as a unity? I feel that this objection must be taken seriously. It is, however, difficult to find any arguments to bring up against it, or for that matter, to bring up to support it. It might be thought that something could be said with regard to the fact; *e.g.*, there is a fact of this structural form and therefore the form is in a sense a unity; but that is no answer whatever—for the difficult case is the case in which the judgment is false and then there is no fact. It would be a matter of little difficulty to get out a large class of theories of judgment, if judgments were all true. Thus no answer can be given to this objection by reference to the fact. I am at a loss to know what to advance in favour of the introduction of a form when this objection is brought up. I can only suggest that a form is a very colourless thing indeed. It is a few blank spaces with a bare logical structure uniting them: and I feel that the kind of way in which it is a unity does not in the least imply any propositional unity. All that is implied is that it is so constructed that if we operate on it, we shall not get nonsense; the existence of the types belonging to each space will make that impossible. And this is an interesting point because it has been advanced as a criticism that on this theory it is possible to judge nonsense. Of course it is

essential for any theory of judgment that such a thing should be impossible. When it is explicitly stated that there is a type belonging to every blank in the form, it will be clear that it is impossible on this theory to judge nonsense—at least when the form is introduced. In the case considered at the beginning where there is no form to regulate the types of constituents, the difficulty can be got over by simply stating it as a property of judging relations that the types of the constituents do not form an independent set.

Thus when we have " $J(I, —, a, b)$ " the nature of  $J$  as a judging relation makes the type of suitable arguments for the empty place automatically determinate, and gives it in terms of the types of  $I, a, b$ . In this way, I feel such a criticism can be disposed of satisfactorily. This has been done partly by making explicit the part played by types in forms. This seems to help one too in answering the objection referred to above—that the introduction of the form as a unity is unjustified, if the proposition itself is not a unity. But, of course, I have not adduced any important considerations which in any way dispose of this criticism, and this criticism must, therefore, be taken into account when we sum up the results of our inquiry.

Another criticism can be advanced and has been advanced against Mr. Russell's theory. In a judgment, it is thought that the verb of the proposition must function as a verb and not as an ordinary constituent. Now there is a definite point in this criticism, and in bringing forward any theory of judgment the verb of the proposition must either function in a special way or some answer must be made to this criticism. In the propositional theory of judgment the verb functions in a special way. But in this theory the verb of the proposition does not function in a special way. And so an answer to the objection must be attempted; but I think I have a satisfactory answer to make to the criticism. It seems to me that the feeling that it has any cogency as an argument is due to a lingering belief in the unity of propositions. It seems to me that it is only as a deduction from the assumption that propositions are unities that one can hold that the verb must function in a peculiar way. Functioning as a verb and not as an ordinary constituent means, it appears, acting as a binder. Acting as a binder of certain constituents means making them a unity. Thus the criticism seems to be reducible to the criticism that the verb binds the elements of the proposition together into a unity. Thus this criticism though it appears to be an objection to the theory and not merely to the assumption on which it is built, *viz.*,

that propositions are not unities, is really an objection to our initial assumption, and therefore will not be dealt with here.

I must add a few remarks with regard to the part played by the form in my theory. All the way along I have suggested analyses of the belief complex which do not involve the form. In the case of very simple judgments, the analysis of the belief without a form was considered satisfactory, but in the more complicated judgments it was found necessary on my theory to allow the form a place in the analysis of the belief complex. Now the operators  $P$  and  $G$ , though they were designed to act on forms, as in the case of 2·2, 2·3, 3·2, 3·3 and 3·4, can possibly be used so as to operate between two concepts: for example, we may perhaps have

$$(\exists x) \cdot \phi x \cdot \psi x = P_x^c \phi, \psi.$$

Now in such a usage it is clear that there will have to be several modifications of my original operators  $P$  and  $G$ , and we shall possibly get  $P_A$ ,  $P_O$ ,  $H_P$  as operators on  $\phi$  and  $\psi$  to give  $(\exists x) \cdot \phi x \cdot \psi x$ ;  $(\exists x) \cdot \phi x \vee \psi x$ ;  $(\exists x) \cdot \phi x \supset \psi x$  respectively. In this way, we can get operators on terms, concepts and particulars such that any proposition can be obtained by using certain operators on certain terms. We shall get, for instance, formal implication expressed neatly in the form

$$G_H^c \phi, \psi.$$

And it may be possible to get operators so introduced that the form can be cut out of our belief complex, and we shall merely have a general form

$$"J(I, (GPE \dots), \phi, \psi \dots)."$$

And in putting this forward I want to meet at once a very obvious criticism. At first sight one is amazed at and disturbed by the number of operators, and one feels, instinctively, perhaps that a theory which requires such a complicated apparatus simply will not do. But I think one must fight against this feeling bearing this point in mind. Propositions on the usual theory when they have two or more constituents are exceedingly complicated structures. A proposition about two concepts and a relation "*cat*" and a "*dog*" and "*being near*," for example, can have a large number of different structures. Thus one may have "There is a cat near a dog." "All cats are near some dog," "There is a dog near no cat," and so on. We get a large variety of logical structures. Now my operators merely attempt to put the peculiarities of each form together so that different operators and combinations of operators acting on one set of terms produce different propositions. Thus the complexity of these groups of operators is due to the complexity of the propositions them-

selves, and for that we cannot be held responsible. Any theory of propositions must allow for the complexity of propositions, and so I am not really introducing in any way a more complicated kind of theory than it is absolutely necessary to have.

I hope I have now shown that this extension of the theory that judgment is a multiple relation from the case of simple relational propositions to apparent variable propositions does not depend essentially on the form being introduced. It has been my object to give a class of theories all of them extending the original idea—so that each can choose for himself between the theory which introduces the form or on the other hand the theory which cuts it out. Thus, if an attack is made on the “*form*” theory, if there is sufficient reason one will let it go without a qualm. If on the other hand the theory substituting further operators beyond the P and G proves untenable, still the stronghold of the theory remains unchallenged. These two are but obvious modifications of a general notion which characterises the class of theories advanced. The essential, the only essential point about the matter is the introduction of *operators*. If those are disposed of, the theory is lost. But, I feel that their introduction is not only justified, but in some way enlightening to the whole subject. Once introduced, they become relevant at all kinds of points in epistemology, and the idea which prompted their introduction can be extended.

A new treatment of attitudes to propositions such as desiring, wishing, fearing, and so on, can probably be given by means of more operators. Their use, seems to me, to offer an escape from the dilemma which confronts us when on the one side we must admit that there is some element in common in such mental events as, “I believe *p*,” “I hope *p*,” “I fear *p*,” “I desire *p*,” and on the other hand we feel for more or less weighty reasons that propositions are not entities. I have put in these possibly irrelevant considerations and hints as to the kind of part operators might conceivably play in a theory of knowledge in order to put them forward for consideration. The mere fact that the idea seems fruitful in such vexed questions as the connexion of inference and implication, tends, it seems to me, to commend the whole notion to one’s notice, and I hope that owing to this a more sympathetic consideration will be given to it than one’s dislike of its complexity and technicality would prompt one to give.

I will now sum up the results of our enquiry. We have considered the simpler kinds of judgments and have offered

various suggestions in each case as to the form of the corresponding judgment complex. We have been able to adduce no important considerations which enable us to decide between the three or sometimes four alternatives which seemed satisfactory with each kind of proposition considered—it seemed that only very weak arguments, such as the argument from simplicity or the argument for uniformity, were possible ones to use, and those were of such doubtful validity and of so little weight that we did not seriously consider them. In this way we had several alternative forms left in our hands. The two large classes into which the class of theories put forward can usefully be divided seem to be the cases in which P and G and E are introduced and the form and those cases in which we have managed to cut out the form. It would therefore be exceedingly interesting if arguments which would enable us to decide between these two classes could be adduced. But this seems to be difficult.

Finally we considered all the objections to the theories which suggested themselves. We considered the objection brought forward by many people that the verb of the proposition must play a part in the judgment complex, different from that played by other constituents, and we venture to think it was due to some remaining vestige of belief in the completeness of propositions. Our enquiry into the difficulty as to correlating the spaces in the form and a whole group of difficulties centering round the employment of *forms* had to be left in an unfinished state, owing to the obscurity round the whole question of the nature of forms. The criticism as to the possibility of judging nonsense we were able to dispose of by a careful statement as to the relations between the types of the constituents of a judgment complex. But with regard to the criticism that in allowing the form, one was tending towards assuming that propositions are themselves unities, although we did not really feel any great weight in the argument, it was not found possible to bring up any counter arguments and the objection must therefore stand for further consideration.

The considerations suggested in this paper have all the way through been put forward in a very tentative way. My attitude has rather been that judgment may or may not be a multiple relation, but if it is, it must in the more complicated cases be extended in some such way as I have suggested. I wished therefore to point out what questions one must be prepared to answer if one is going to adopt the theory that belief is a multiple relation rather than to look into the question as to how far the whole theory is a true one. If it is to be

worked, this would seem to be how it is to be done. I have tried to point out the difficulties of the question. We must next proceed to give estimates as to the weight of the objections brought up and to decide as to the truth of the theory.

## V.—DISCUSSIONS.

### THE "CORRESPONDENCE-NOTION" OF TRUTH.

IN the January MIND (No. 109, pp. 66-74), Mr. A. K. Rogers pleads for a fresh consideration of the "correspondence-notion" of truth. He is "inclined," he tells us, "to be sympathetic toward the notion," and he argues at some length that the discussion of "correspondence" in my *Essay on the Nature of Truth* betrays misunderstanding or misrepresentation of the theory. Whilst disclaiming any attempt to offer "a positive defence of the doctrine," he gives a brief account of the "correspondence-notion," as he understands it, together with an analysis of "the part that the mind plays in correspondence"; and, with regard to this analysis, he says (p. 74) "I only claim that it is perfectly intelligible in itself,<sup>1</sup> and that it avoids all the ambiguities of Mr. Joachim's account".

With all due deference to Mr. Rogers, I must say frankly that I do not agree with his interpretation of my discussion of "correspondence". I think—if I may say so without discourtesy—that in many important respects he has failed to understand what he is criticising. This is, however, a matter of no great moment, except possibly to Mr. Rogers and myself, and I do not propose to reply in detail to his criticisms. I am quite content to leave the issue to the decision of any careful reader who will take the trouble to compare my discussion with the interpretation offered by Mr. Rogers.

But the account which Mr. Rogers himself gives of the "correspondence-theory" seems to me so far from being "perfectly intelligible in itself"—seems, indeed, to put it bluntly, so confused and untenable—that I feel moved to examine it in some detail, in case no other reader of MIND should take the matter up.

§ 1. "The essence of the correspondence-theory" is set out briefly on p. 67; and a fuller analysis is given on p. 74, where "the part that the mind plays in correspondence" is taken into account. In the first passage we are told that the theory "presupposes two main theses. The first is, that in 'truth' there is always a duality involved; on the one hand 'ideas,' and on the other a reality which is existentially different from the ideas, and known only through them as a medium. And in the second place,

<sup>1</sup> If the theory, as expounded by Mr. Rogers, is "perfectly intelligible in itself," what need is there for any "further effort . . . to defend" it? But the reader will probably agree with me that Mr. Rogers is "only" claiming a great deal.



it holds that if we are to know the nature of this reality 'truly,' it must in so far correspond to our ideas of it." An example is added, from which it appears that "the nature of the reality," if it is to be known, must "correspond" to my ideas of it in the sense that it "must somehow be reproduced or duplicated" in them.

With this statement I have no desire to quarrel. But I would call the reader's attention to the important admission that the reality is "known only through" the ideas "as a medium"—an admission which is, I think, both necessary and fatal to the theory of truth as correspondence; and I would urge upon Mr. Rogers that, since it really is not possible to *know* anything 'falsely,' the word 'truly' (in his formulation of the second main thesis) is—to say the least—redundant.

§ 2. The trouble begins when Mr. Rogers attempts to explain these "two main theses" more precisely. With regard to the *second thesis*, we find him maintaining that "resemblance is all that the 'correspondence-theory' requires" (p. 68). "It is resemblance," he assures us, "that really is relevant to the problem of truth" (*ibid.*). Now "resemblance" is a wide term, and there are cases of "resemblance" in which the relationship would be more accurately expressed as "correspondence".<sup>1</sup> But Mr. Rogers proposes to identify "correspondence" with "resemblance" in the *barest sense, i.e.,* to water down the significance of "correspondence," so that it becomes synonymous with "resemblance" when that term is invested with a minimum of meaning. "Why," he asks, "is a resemblance judged to exist between a portrait and its original?—because the two possess something in common, or because of the *specific nature* of this something? I should answer without hesitation that the former is the case. If we are allowed to say that resemblance consists in the possession of *any* common character, we not only can explain<sup>2</sup> the instance in hand—where the identity is that of plan or purpose,—but also the innumerable other cases of resemblance, since the basis of similarity can be anything you please" (p. 69).

It seems clear, then, that according to the "correspondence-notion," as Mr. Rogers understands it, the truth of a judgment requires no more than "something in common" between the reality about which I am judging and the "ideas" which form the "ideal content" of my judgment. For it demands "correspondence": but "correspondence"—so far as the theory goes—is no more than "resemblance," and "resemblance consists in the possession of *any*

<sup>1</sup> Mr. Rogers says that I use "correspondence and resemblance interchangeably" (p. 68). I do not think that any of the statements in my *Essay on the Nature of Truth* commit me to the view that "to correspond" and "to resemble" necessarily mean the same thing: and it was certainly not my intention to reduce "correspondence" to "resemblance" in the most elementary sense of the term.

<sup>2</sup> For my own part, I am confident that I could "explain" anything and everything, if "explanation" means no more than this.

common character". Undoubtedly this interpretation of its second "main thesis" will secure the correspondence-theory against much criticism. For, even in the region of philosophical discussion, it is impossible to grapple with what is thin and impalpable: and a theory so vague and elusive is hardly worth discussing.

§ 3. But still graver difficulties show themselves in the "correspondence-theory," when Mr. Rogers proceeds to develop and explain its *first main thesis*. According to this thesis, it will be remembered, "truth" always involves (a) "ideas" and (b) "a reality which is existentially different from the ideas, and known only through them as a medium" (p. 67). The fact that these "extra-experiential existences," as Mr. Rogers calls the "reality" (cf. p. 73), can only be known through "ideas"—i.e., through some form of experience—would seem to imply that the two "corresponding" (or "resembling") factors must both fall within experience. In other words, it seems to follow that the reality, *quâ* "extra-experiential," can have nothing to do with the theory. For, *quâ* "extra-experiential," it cannot be known, and therefore cannot be compared: whilst *quâ* known, or *quâ* comparable or compared, it has been drawn within the grasp of "ideas". Mr. Rogers admits that there is a difficulty here. But he insists that it is possible to conceive extra-experiential existences which yet correspond to "ideas,"<sup>1</sup> and on p. 74 he tries to make this conception clearer and more definite. The real things whose existence the theory presupposes—the extra-experiential existences—have (so Mr. Rogers now tells us) "certain definite characteristics, or a determinate nature". And the theory "supposes that this nature or essence of the object<sup>2</sup> can be *thought*; that more or less adequate ideas of what it is like can also form a part of our mental furniture".

I confess that this last sentence has puzzled me a good deal. But after studying it carefully in connexion with certain of Mr. Rogers' later statements, I have been driven to the following interpretation:—

The extra-experiential existences possess an "ideal character". This is what is meant by their "definite characteristics," their "determinate nature," their "nature or essence". And this "ideal

<sup>1</sup> "Now I grant again that a distinction between experience and extra-experiential existences, and the definition of knowledge in terms of a transitive or mediate way of getting at the latter, may prove untenable; but the *conception* is certainly, as a conception, not so totally devoid of sense that an opponent cannot even get it in mind sufficiently to criticise it" (p. 73). The "*conception*" in question is that of "a reality *beyond* experience to which the mental factor corresponds".

<sup>2</sup> "Object" may seem an unfortunate term to apply to an *extra-experiential* existence. But even Kant, as we know, was sometimes so inconsistent as to speak of a "transcendental object": and of course Mr. Rogers will plead that the whole point of the "correspondence-theory" is that the object of knowledge is a reality existing in itself beyond experience.

character"—although a character of *extra-experiential* existences—is also (in more or less adequate form) "a part of our mental furniture". As "part of our mental furniture," the ideal character of the extra-experiential existences is an "idea"—or, as Mr. Rogers expresses it, "a fugitive 'ideal' content professing to grasp descriptively the objective characteristics of a real world". It is thus "an ideal or thought content," a "more or less adequate" idea (or ideas) "of what" the object "is like": and, in judging, the mind "refers" it to the object.

I hesitate to believe that this is Mr. Rogers' meaning. But, try as I will, I cannot interpret his statements in any other way. If I am misrepresenting him, I hope that he will not only repudiate my interpretation, but also explain (a) what other meaning he attaches to the "essence," "determinate nature," "ideal character" of the extra-experiential existences, and (b) what is the force of the term "also" in his statement that "ideas of what it is like can also form a part of our mental furniture".

If, however, my interpretation is correct, the advocates of the correspondence-theory would be ill-advised to accept the view which Mr. Rogers is attributing to them. For an extra-experiential existence whose "character" or "nature" is "ideal": whose character may fly across and, having obtained a lodgement in my mind, may fly back again as an "idea" which I "refer" to the object: whose character, indeed, if we take Mr. Rogers' words strictly, is also "an idea of what it" (*i.e.*, the object) "is like":—such an existence may be "beyond experience" in the sense that its conception is self-contradictory and nonsensical, but it is not "extra-experiential" in the sense that its being is devoid of experienced elements. For, on the contrary, its "nature," its "essence," its *what*, is admittedly through and through an object of thought, and actually (to some extent at least) a "part of our mental furniture".

§ 4. If hitherto I have rightly interpreted Mr. Rogers, the correspondence-theory may be summarised as follows: A "true" judgment is true, because it "resembles" certain extra-experiential existences to which it refers, *i.e.*, because the judgment and the existences have "something in common". (*Cf. above*, § 2.) This identical something (the basis of the resemblance) is the "ideal character," or the "determinate nature," or the "essence" of the extra-experiential existences: and it is also the "ideal content" of the judgment, or our idea of what the existences are like. For we must apparently suppose that the identical something passes to and fro across the barrier which divides the mind from its extra-experiential objects. Thus it may enter for a time into the room, which I call my "mind," and help to "furnish" it: but presently, when I judge, my mind will "refer" this "fugitive ideal content" to the extra-experiential existence whose "character" it was and is—*i.e.*, will restore the runaway to the region (or the substance) from which it had temporarily escaped. (*Cf. above*, § 3.)

Or perhaps—for some of Mr. Rogers' statements seem to imply a different view—what flits to and fro across the barrier, is not the

"essence" of the extra-experiential existence itself, but a mere "reproduction" or "duplicate" thereof. (*Cf. above*, § 1.) If so, Mr. Rogers has still to tell us *what* is the identical basis of the "resemblance". *What* is it that the true judgment and its extra-experiential object—*what* is it that the mental "duplicate" and its real "original"—have "in common"?

§ 5. Though I fear that I have already exhausted the reader's patience, I have still to examine the concluding portion of Mr. Rogers' "perfectly intelligible" analysis of "the part that the mind plays in correspondence".

There is, he maintains (p. 74), "no experienced connexion" between the objects and the ideas; "it is the very point of the theory that they do not exist together for a mind. . . . For . . . the part which the mind plays . . . is, not to know itself, or its ideas even, along with the object in a single whole of experience into which both enter bodily;<sup>1</sup> it is to *refer* its ideas . . . to the object, in a unique relationship which one does not understand by substituting for it another relation of compresence, but only by looking at the specific act of knowing, and recognising it for what it claims to be. Correspondence, accordingly, is not a relation which we are conscious of when 'we know the object' . . ."

So far, then, however much we may distrust Mr. Rogers' intuitive vision of what "the specific act of knowing" is, his general position is plain enough. I may "know an object"; but I cannot, in knowing it, know whether I know it or not. Truth consists in "correspondence"; but, when I am judging truly, I can have no opinion as to whether or no my judgment "corresponds" to the reality about which I am judging.

Yet, if the theory of truth as correspondence is to be maintained, it is necessary, as Mr. Rogers is well aware, to show that the resemblance between "ideas" and "reality" can be, and is, recognised by some mind in some act of knowledge (*cf. pp. 72-73*). Accordingly, he proceeds at once to urge that "later on we may note that our ideas actually were involved at the time". This subsequent recognition, he tells us, is effected in "a new act of knowledge which now has as its object the thing *plus* the former idea of it . . ." But in the very next sentence he corrects this description of the object of the "new act of knowledge": and the correction is both inevitable, and fatal to his theory. For, still referring to the "new act of knowledge," he says: "Here indeed at last the *ideas* of the two—of object and thought of object—are present in a unity of consciousness, or otherwise we could not compare them".

In the "new act of knowledge," therefore, we are *not* comparing "the thing" and our "former idea of it". Indeed, we obviously cannot do so. For *ex hypothesi* "the thing" is extra-experiential,

<sup>1</sup> It is difficult to see how anyone could suppose that ideas enter bodily into anything. *Cf.*, however, Mr. Rogers' sentence about "mental furniture" (*above*, §§ 3 and 4); and Plato, *Republic*, 345b.

and *ex vi termini* our "former idea" is past, so that they are not now before our mind or "present in a unity of consciousness". Hence, in the "new act of knowledge," we cannot possibly recognise that there was (or was not) "correspondence" or "resemblance" between "the thing" we knew in our former judgment and the "idea" or "ideas" whereby we knew it. The utmost we can effect, in our "new act of knowledge," is a comparison between two *ideas* and a recognition that they "resemble" (or fail to "resemble") one another. For we are now comparing (a) our present idea of our past idea of the thing, *i.e.*, our memory of our former thought, and (b) our present idea of "the thing" so far as that was revealed to us through the medium of our former thought. And neither of these two comparable elements—neither of these two "ideas"—can by any possibility be regarded as an "extra-experiential existence" or as a "reality beyond experience". Hence, even if they correspond to one another, and even if we can recognise their correspondence, we can draw no inference relevant to the correspondence-theory as Mr. Rogers has expounded it. For that, as we know, insisted that truth is a correspondence between extra-experiential existences and our ideas.

In conclusion, the reader's attention may be drawn to what is perhaps one source of the confusion in this part of Mr. Rogers' analysis. The new act of knowledge, he says, "has as its object the thing *plus* the former idea of it"; and he goes on to speak as if "thing" and "idea"—the joint constituents of the object of the new act of knowledge—were *two* factors, between which a relationship of correspondence might be discovered. But we must remember that, according to Mr. Rogers himself (*cf. above*, § 1), the "thing" can only be known through the medium of "ideas". Hence, the content of the former act of knowledge, which has now become the "object" of the new act, is not two comparable factors—not "a thing" on the one hand, and an "idea" on the other, mutually independent of one another. It is a single complex, which Mr. Rogers imperfectly describes as "the thing *plus* the former idea of it," thus concealing the fact that neither constituent is what it is apart from the other. For, as entering into our former act of knowledge, "the thing" was that which our idea of it revealed, and our "idea" was simply the medium revealing the thing.

HAROLD H. JOACHIM.

## ON OCCUPYING SPACE.

THE object of this paper is chiefly critical. I wish to explain certain difficulties which I seem to find in the relation of bodies to space. But at the end I shall suggest that a sense of some such difficulties may underlie language used by Plato in a well-known passage of the *Timaeus*, 50-52. How far my difficulties have been already expressed by others, I do not know; and should be grateful to any reader who would point out to me an exposition of them.

Fundamentally, the difficulty may be put this way: What is meant by saying that a body occupies space? Connected with it is the question, what distinguishes a body from a geometrical solid of the same outline, or, What is solidity? But I will begin by asking a question slightly different, in which I find the problem more easy to indicate: What happens when a body moves?

When a body moves, it comes to be in a new place. Now I think we commonly imagine that to put a body in a place is like putting it in a box, and that there is no more difficulty about the one than the other. This is not so. To put a ball in a box is to bring it into new space-relations to other bodies; in particular, to the box. I am not concerned with the space-relations of bodies to one another, but of a body to the space which it occupies. Now if anything is unextended, I cannot occupy a place with it; I cannot put a sound or a fear in a new, or any, place. The moving thing is already an extended thing, occupying a place, *i.e.*, a certain portion of space. When it moves, that portion of space does not move. Does the body then, if I may so express myself, carry its extension with it, or not? If not, it would appear that in the act of motion it ceases to be extended; if yes, that one extension is in another. I am aware that some will denounce this language, and say that I ought not to speak of an extension, but only of an extended thing; and that by so putting it, the difficulty disappears. I hardly think so, and I am content to use the phrase, if it will create a sense of the difficulty.

Let me put it in another way. Imagine a geometrical solid, discriminated by the colour of its surface. A coloured surface has no thickness, though the body whose surface is coloured may have. Now if the position of this coloured surface shifted, the geometrical solid would appear to move. Apart from problems about continuity (with which I am not concerned), I find no difficulty here, for there is no space-filling body; what shifts its place is a mere outline, which carries, as it were, no extension with it.

Doubtless there are physical objections to the notion of a coloured

surface that is not the surface of a body. But there are also physical difficulties in defining the difference between a solid and empty space. And without referring to these, which involve mathematical questions beyond my depth, I should like to refer to some of a more general nature.

What do we in fact conceive a solid body—a body—to be by itself? We perceive it by sight and touch; but what we see of it is the coloured surface, and the colour, I will venture to say, does not belong to it by itself (if it exists by itself). No doubt, as a result of what we see, we come to conceive it to have a solid figure, which we did not see; but that is a geometrically solid figure, to the understanding of which the question what fills it does not matter. We may indeed distinguish in thought a hollow from a solid body. The hollow body if divided would look different from the solid body: it would not show a flat coloured surface in the plane of section. This, however, only leaves us with the same problem on our hands; for what are we to say about the solid shell? If there are solids at all, ultimately these must be absolute solids. We can imagine these divided *indefinitely*; at each stage the parts would show flat coloured surfaces in the plane of section; at no stage do these colours belong to the parts by themselves, nor does the fact that the parts are thus visible tell us at all what the body is, of which the surface looks thus. By sight then we cannot learn what it is for a body to be solid. As little can we by the sense of touch, by which we are led to call it hot or cold, hard or soft, rough or smooth. None of these qualities belong to the body by itself, though the configuration, in virtue of which it feels rough or smooth, may do so; but configuration again is geometrical, and we are asking not what the geometrical figure is, but to what it belongs. Hardness and softness, however, involve resistance; and it is in its resistance that the difference of body from empty space is often supposed to lie. What then is resistance, in the body? We recognise it indeed by the muscular feelings which we experience when we endeavour to overcome this resistance, or come in contact with the resisting body. But these are just feelings of ours, and we must abstract from them in considering what it is for the body to be solid. As little does it help to say that the solid body is impenetrable. Apart from any physical difficulties in absolute rigidity, we must recognise that the solidity of A cannot consist in an inability on the part of B to penetrate it. We want to know what in A prevents B from penetrating it. If any one replies, its solidity, I ask whether he has carried the question further; whether we know what we mean by solidity, or only give the name to that which shows itself sensible in certain ways.

And if we ask in what ways, it seems to me the most fundamental are two, of affecting the muscular sense, and of visibility. The former connects with nothing that can be ascribed to the body by itself; the latter connects with geometrical figure, which can be so ascribed. The solid body, in the last resort, is that whose



geometrical figure remains unaltered. It is true that we may conceive a solid body to change its figure by the sliding (for example) of one part along another in an imaginary plane of section ; but the parts retain their figure ; we cannot suppose this subdivision carried on so that there are no parts, however small, whose figures are unchanging, without supposing a solid to be composed of points. What we understand then in the solid body is its solid shape, the geometrical solid, to the nature of which size makes no difference. What fills this contour we do not understand ; yet the solidity which we sought to understand was the space-filling solidity, not the geometrical. We have not discovered what distinguishes from the geometrical solid the solid body of the same shape, if these distinguishing characters are to be something belonging to the body by itself. Therefore we have not discovered what happens to the body itself in its movement, except that the geometrical shape shifts ; nor what its occupancy of space is, other than that the shape is displayed in that particular portion of space.

Now in the passage of the *Timaeus* to which I have referred Plato distinguishes three γένη (50 C), τὸ μὲν γιγνόμενον, τὸ δ' ἐν ᾧ γίγνεται, τὸ δ' ὅθεν ἀφομοιοῦμενον φέεται τὸ γιγνόμενον. The last of these is the forms, τὸ κατὰ ταῦτα εἶδος ἔχον, ἀγέννητον καὶ ἀνώλεθρον, οὔτε εἰς ἑαυτὸ εἰσδεχόμενον ἄλλο ἄλλοθεν οὔτε αὐτὸ εἰς ἄλλο ποιῖον, ἀνόρατον δὲ καὶ ἄλλως ἀναισθητόν, τοῦτο δ' οὐκ ἐν νόμοις εἴληχεν ἐπισκοπεῖν (52 A). The first is what comes to be and perishes, sensible things, τὸ ὁμαίωμα ὁμοῖόν τε ἐκείνῳ, αἰσθητόν, πεφορημένον αἰεὶ, γιγνόμενον ἐν τινὶ τόπῳ, καὶ πάλιν ἐκεῖθεν ἀπολλύμενον, δόξῃ μετ' αἰσθήσεως περιληπτόν. The remaining γένος is τὸ τῆς χώρας, φθοράν οὐ προσδεχόμενον, ἔδραν δὲ παρέχον ὅσα ἔχει γένεσιν πᾶσιν (ib.). Sensibles he had a little earlier called εἰσιόντα καὶ ἐξιώντα ; they are τῶν ὥρων αἱ μὲν ματα, τυπωθένσα ἀπ' αὐτῶν τρόπων τινὰ δύσφραστον καὶ θαυμαστόν ; and through them this factor of place appears, at successive moments thus and thus—φαίνεται δι' ἐκείνα ἄλλοτε ἄλλοιόν (50 C). What Plato means is this. There are certain forms, such as sphericity or pyramidity, which we cannot see, nor visually imagine (for we can only see or imagine a sphere or a pyramid), but which we conceive. There are sensible spheres and pyramids, having the same name with 'the sphere,' 'the pyramid,' which cannot be except somewhere (whereas sphericity has no place), but whose relation to their universal or form, after which they are said to be fashioned or of which they are said to be imitations, is very hard to state. And there is space, wherein alone these things fashioned after the forms can be, which is distinguished only as they appear in it, and which by itself cannot be perceived at all, though reasoning forces us to admit it as a third γένος—αὐτὸ μετ' ἀναισθησίας ἄπὸν λογισμῷ τινὶ νόμῳ (52 B). I suggest he meant, that what we understand in bodies in their geometrical character (not their solidity) ; that when a body moves, this geometrical solid which somehow images an eternal geometrical form appears here instead of there—disappears here, reappears there ; but how, we do not understand.

Now to the study of these geometrical solids one thing, which they appear to have, is quite irrelevant, *viz.*, their magnitude. If sphericity is somehow shown to us by an image of it in space, the image must be of some size; but of what size, matters not. The only questions of magnitude that arise in our efforts to understand bodies are questions of relative magnitude. It arises from the nature of eternal forms that, *e.g.*, any cone is one-third of the size of a cylinder of the same base and height, and so forth. The ratio is intelligible; but to that again the size of the bodies that stand in the ratio makes no difference. The intelligible features in bodies are their ratios and geometrical forms: what may display these forms, or stand in these ratios, we do not understand. That anything should so stand involves the fact of space, a thing not really intelligible, nor real as the ratios and forms are real. And the sensible bodies are not real. If they were, then would arise the question of their real size—a question with no answer. You cannot say that a given portion of space, or the body occupying a given portion of space has any size of its own. Its parts contain as many parts as itself does. This is why the factor of space is called μέγα καὶ μικρόν; you may indifferently regard any portion of space as large or small. But you cannot indifferently regard a ratio as  $\frac{1}{2}$  or  $\frac{1}{4}$ . Ratios, like geometrical forms, are eternally distinct from each other and intelligibly characterised. Bodies display them in a place. When they move, the form is displayed in another place, and that is the movement of the body. When one shrinks another ratio is displayed.

I do not say this doctrine leaves no difficulties. I only suggest that there are certain puzzles which we commonly overlook in the familiar fact of the motion of sensible bodies, and that perhaps they had attracted Plato's attention, and helped to account for his formulation of problems in the *Timaeus*. And they are problems, some solution of which seems necessary to the realism which holds bodies in space to exist independently of perception.

H. W. B. JOSEPH.

## VI.—CRITICAL NOTICES.

*Papers on Psycho-Analysis.* By ERNEST JONES, M.D., M.R.C.P. (Lond.). Revised and enlarged edition. Baillière, Tindall & Cox. Pp. x, 715.

THIS work is a much enlarged edition of an earlier book by the same author. It consists of papers divided under the headings of General, On Dreams, On Treatment, Clinical, and On Education and Child-Study. The author is a Freudian of the strictest sect; he dedicates his book to the master, and takes several opportunities to anathematise Jung for his later heresies, whilst recognising the value of Jung's earlier work.

If Freud's theories are to be fairly criticised we must carefully separate five different questions. (i) Are repression, distortion, and the shifting of 'affect' from one object to another, genuine and important factors in mental life? (ii) Does repression occur almost wholly with regard to sexual matters? (iii) What is the precise 'cash-value' of the Freudian technical terms, such as the unconscious and the censor? Evidently there is an element of mythology in them, and we have to ask how far the phraseology used may have led Freudians beyond what the observed facts will justify. (iv) How far does a given doctor's analysis of a given case seem to be justified by the facts which he records. (v) Is it desirable on practical grounds that psycho-analysis should be commonly used for dealing with nervous diseases?

The fourth and fifth questions seem to me to be philosophically unimportant; yet I am much afraid that a negative answer to the fifth, and a feeling of disgust at the conclusions and doubt as to the adequacy of the arguments in connexion with the fourth, have caused many philosophers to reject the whole Freudian theory. Dr. Jones deals with both these points in some measure. He admits that the fragments given of actual analysis are very scrappy. They certainly are; and the conclusions arrived at in particular cases seem, on the data offered, to be much on a level with Serjeant Buzfuz's proof of the erotic significance of chops and tomato-sauce. [Indeed the Serjeant's contention that a warming-pan is an erotic symbol is certainly not in the least further fetched than Dr. Jones's *obiter dictum* that people cling to a gold-standard because gold is a well-known symbol for excrement, 'the material from which most of our sense of possession in infantile times was derived' (p. 172).] Dr. Jones, however, has two excuses. To give a complete analysis would be too long and tedious. And a person who has never done

any psycho-analysis and is not used to the extraordinarily flimsy connexions which satisfy the unconscious cannot estimate the probability of a given analysis being correct. I think we must in fairness grant the second contention. An outsider cannot estimate the probability of special arguments in an entirely unfamiliar region; the same difficulty meets one constantly in considering other men's experiments in psychical research; and one can see from one's own how many points there are which legitimately affect one's judgment of probability and yet cannot be stated satisfactorily to others. At the same time psycho-analysts ought to remember that the flimsiness of the connexions which satisfy the unconscious cuts both ways. If it ought to make us chary of denying their conclusions; it ought to make them equally chary of asserting their analysis to be the only possible one in a given case.

The question whether the moral effects of psycho-analysis are likely to be good or bad is not important to us in any sense except that, as Dr. Jones justly points out, the way in which many people reject the whole Freudian psychology because they think its conclusions disgusting and its practice dangerous is a fine example of Freud's own doctrine that consciousness is largely occupied in providing imposing arguments to satisfy and mask unconscious wishes. We can therefore turn to the remaining three questions.

(i) Dr. Jones's book, my own introspection and observation, and the accounts which I hear from medical friends treating cases of shell-shock, leave me with no doubt as to the extreme frequency and importance of repression in mental life. The shifting of affect is also an easily observable phenomenon. In my last year at school I had on certain occasions to read the lesson for the day. I always hated the prospect of this, which filled me with acute nervousness. On the morning of the day I would awake with a diffused feeling of uneasiness, and this would persist when the thought of reading the lesson was not before my mind, so that I would sometimes catch myself for a moment wondering what was the cause of the curious feeling in my stomach. I can therefore well believe that emotions can become separated from a consciousness of their objects and float loose for a time, either to appear as bodily symptoms or to be directed to consciously cognised objects.

As I can verify all the characteristic Freudian mechanisms in a mild form in my own mind and am told of their existence in acute forms in soldiers by observers whom I have every reason to trust, I feel no doubt of the substantial correctness of this part of Freud's theory. To this evidence must be added the important fact, well brought out by Dr. Jones, that Freud's theory provides an explanation of numbers of odd occurrences in ordinary life, such as slips of the tongue or pen, which we ordinarily treat as due to 'chance'. Leibniz, who seems to have foreseen everything, was never tired of pointing out that the appearance of indeterminism in the mind is due to our failure to notice subconscious links in chains of causation which are partly conscious. As usual, Leibniz was right; and

he would doubtless have welcomed Freud's work with as much enthusiasm as he would have shown for Frege's.

(ii) Dr. Jones treats in some detail the view that what is suppressed is nearly always ultimately sexual matter. His position is that Freud uses the word 'sexual' in a much wider sense than most people, and that, in this sense, his statement is correct. He does not give any very precise definition of Freud's usage, and leaves us to infer it from an analogy to the elements in chemistry, and from the statement that Freud applies 'the term "sexual" to mental processes which, like shame, derive their origin from the sexual instinct'. Now psycho-analysis, according to him, shows that a great many processes which do not seem to be so derived really do have this origin. This may be true; but it is clear that the question at issue here between Freud and his opponents is one of fact and not of terminology. Freud's extension of the word 'sexual' is only justified if he *can* make out that the processes to which he does, and his opponents do not apply it originate in processes which are sexual in the narrower sense which his opponents employ. And this, I take it, is what they deny.

As to the question of fact, I think the Freudians are right in ascribing much greater sexual interests to quite young children than ordinary people would admit. Freud's description of the young child as '*polymorph pervers*' seems to me literally correct, if we interpret him to mean that most children have in various degrees the desires which, when developed at the expense of others, constitute recognised perversions. But I should substitute for Dr. Jones's extension of the word 'sexual' the following: A process in a child may be called 'sexual' if processes in adults which *develop from it* as their chief source, and in a continuous way, are sexual in the narrower sense. I thus take the converse of Dr. Jones's definition, and add two limitations. Dr. Jones is never tired of pointing out that ordinary psychologists constantly take as *the cause* of a mental event some trivial but striking conscious factor in its causation. He is right; but Freudians are not wholly guiltless of a similar fallacy. Dr. Jones derives 'a passion for lucidity of thought' (together with some hundreds of other mental characteristics of the most diverse kinds), 'from infantile analerotic' emotions. I daresay the one has sometimes something to do with the other; but the connexion is so slight and the other factors which produce a passion for lucidity of thought must so enormously exceed the single factor of infantile interest in the process of excretion that it is ridiculous to speak of deriving the former from the latter. Psycho-analysts seriously prejudice their own very good claims by this kind of nonsense, which they might well reserve for Pemberton-Billing trials and similar legal knockabout farces.<sup>1</sup>

<sup>1</sup>One is sometimes reminded by Dr. Jones of the young man in Mallock's *New Republic*, who had in his portmanteau twenty-seven (I think) theories of the origin of the Idea of God, each more degraded than the last.

I am still rather sceptical as to the prevalence of the famous 'Oedipus Complex'; not because it shocks me, but partly because I can detect no trace of it in memory whilst I can remember other equally disreputable infantile wishes (from the adult point of view), and partly because it seems to imply much more definitely directed sexual desires in very young children than there is otherwise evidence for. If the incest-motive towards parents be so very common in young children, why is it practically always repressed at such an early age? The wickedness of incest is not, I believe, a common subject of conversation and admonition in the nursery.

Subject to these limitations I think we may accept the Freudian view. It is clear that hardly any of our early wishes are subject to such strong social repression as sexual ones, and it is therefore not surprising that, if there be anything in the theory at all, repressions of this kind are found to be at the root of a large proportion of nervous disorders.

(iii) The third point is psychologically the most important. I must first remark that there seems to be a distinct inconsistency in Dr. Jones's book as to the characteristics of the unconscious. Throughout the greater part of it the unconscious itself is supposed to be radically illogical, and to move by means of the most trivial and superficial connexions. But in the chapter on Dreams a different view is presented. Here it is constantly insisted that the latent content (*i.e.*, the unconscious thought) underlying a dream is logical and coherent, and that the incoherence of the dream is due to distortions made in the latent thought with a view to 'passing the censor'.

The next question is: What do we learn from the Freudian results as to the existence of unconscious states of mind and the material of which they are formed? The unconscious is actually defined by Dr. Jones simply as what we cannot become aware of by acts of voluntary introspection. It is thus *defined* (a) negatively, and (b) by a relation to possible acts of introspection.

Now our inability to cognise these states by introspection might, *a priori*, be due to one of three causes. (a) It might be simply because they do not exist to be introspected; or (b) because, although they exist, they are so radically different from ordinary states of mind that it would be as inappropriate to expect us to be able to introspect them as to introspect the atoms in a benzene nucleus; or (c) because, although they exist and are of the same general character as conscious states, they have either some peculiar property or some peculiar relation to the rest of our minds which prevents us from directing acts of introspection upon them. Dr. Jones at one place early in his book adopts a highly agnostic attitude, but it is pretty clear from his language at all other places that he proceeds on the assumption—conscious or unconscious—that the facts imply the second form of the third alternative. The unconscious is supposed to consist of the same sort of stuff as the conscious and to coexist with it. But it has a relation to the part of our mind which introspects different from that which our conscious states have, and

this relation prevents us from directing introspective attention on it. Now the question is: Do the facts justify this inference?

Before we can deal with these questions it must be noticed that there is another view about the relation of the conscious and the unconscious which hovers throughout the book and does not seem to have any close connexion with the definition quoted above of unconscious states. On the theory which we have just now ascribed to Dr. Jones, and which fits in best with his definition of the unconscious the real object of repression is, not the unconscious states of mind, but acts of introspection. What happens in repression, on this theory, is simply that attention is diverted forcibly from certain states of mind. But Dr. Jones almost everywhere speaks as if the repression were exercised on the states of mind themselves, as if they constantly bobbed up and were thrust down by the censor. This *may* be merely a picturesque way of describing a diversion of attention; but, if it be taken literally, it implies a quite different theory of the unconscious, of which two remarks must be made. (a) It has no obvious connexion with the explicit definition of the unconscious which Dr. Jones offers; and (b) It *assumes* the coexistence of the unconscious with conscious states of mind. Let us call this the Threshold Theory, and the other the Introspection Theory, and let us begin with the Introspection Theory.

*Introspection Theory.*—The coexistence of unconscious states with conscious ones seems to be inferred from two facts. (a) Certain bodily symptoms, certain irrational fears, and other conscious states which are inexplicable so long as we confine ourselves to their conscious or pre-conscious antecedents and concomitants persist and develop over a space of time. (b) By an appropriate method of psycho-analysis we can become aware of states of which we could not otherwise become aware. These seem to explain the otherwise inexplicable bodily symptoms or conscious states. It is assumed as self-evident that if they did not exist during the period over which the symptoms have lasted they could not explain these symptoms. Further, when the process of analysis has been carried out, the states of which we become for the first time aware seem to be of the same general nature as ordinary conscious states. Lastly their value as links in an explanatory chain depends on assuming that they are substantially analogous to conscious states. An inexplicable conscious fear directed towards closed spaces is explained by an originally quite rational fear of (say) being buried in a dug-out. The thought of the dug-out has become unconscious; it is assumed to *persist* in order to explain the persistence of the conscious fear of closed spaces, and to explain the fact that on psycho-analysis we do become aware of it; it is assumed to *resemble* in structure a conscious fear of a consciously cognised object in order to explain the irrational conscious fear of closed spaces.

Now all this inference depends on suppressed premises which are open to criticism. (a) It is not necessarily true that, because an effect persists and develops, its cause must persist too. (b) Even if



we accept this metaphysical axiom about causation all that is necessary is that *something* should persist. This something might (i) cause the symptom or the conscious state, and (ii) in co-operation with the process of psycho-analysis cause a memory of the incident which originally started the trouble. The fact that under certain circumstances you remember an incident X at most proves that *something* Y persists in the mind which, together with these circumstances, produce a memory of X. It has no tendency to prove that the persistent Y is itself a cognition of X. The metaphysical dogma assumed here is that cause must resemble effect. (c) The language used about the transference of affect, and the distortion of the unconscious by the censor goes far beyond the observable facts, unless it be taken as a mere metaphor, and is hardly self-consistent. Suppose the unconscious state could be proved to be a fear of an unconsciously cognised object O. Suppose that the conscious state which it causes is a fear of a consciously cognised object  $\Omega$ . The doctrine of the transference of affect, taken literally, asserts that the fear factor  $\phi$  in a complex  $\phi \rightarrow O$  can be split off and directed to  $\Omega$  to form the complex  $\phi \rightarrow \Omega$ . Now I should like to know (a) what is the criterion of identity used? How do you know that the  $\phi$  factor in  $\phi \rightarrow \Omega$  is *the same* as the  $\phi$  factor in  $\phi \rightarrow O$ ? (b) If the transference of affect be taken literally it contradicts the view that the unconscious state is a *fear*. If  $\phi \rightarrow O$  in the unconscious be literally broken up and its affect transferred to a consciously cognised object  $\Omega$ , what exists in the unconscious is not a *fear* of O but an unconscious *cognition* of O. Now psycho-analysis makes the patient aware of a *fear* of O. Hence, if we take the transference of affect literally, it is impossible that the state of which psycho-analysis makes us aware can be the same state as persists in the unconscious. The theory, as offered, tries to make the best of both worlds. By talking of the transference of affect as if affect could be moved about and identified it implies the persistence in the unconscious of states to which it can be joined and from which it can be separated. By talking of the states that we *discover* on psycho-analysis it implies that these are the states that have existed all along in unconsciousness. But it fails to notice that the two lines of argument destroy each other, since they lead to radically different unconscious states.

Two alternative theories would seem to be possible. (i) A given affect is either wholly conscious or wholly unconscious, and there is no sense in talking of its being transferred from an unconsciously cognised to a consciously cognised object. But a conscious affect may be directed at the same time to two objects, one consciously cognised and the other unconsciously cognised. Transference would then mean, not the *substitution* of a consciously cognised object for an unconsciously cognised one, but the *addition* of a consciously cognised object to the unconsciously cognised one to which the affect is already directed. (ii) A milder theory is simply that when a past emotional experience can no longer be recalled except by psycho-analysis the trace that it leaves tends to cause a

conscious emotional experience of the same general quality directed to some consciously cognised object. The metaphysical dogma involved in passing beyond this view is the assumption that because A is a remote cause of B, and A and B contain qualitatively similar factors  $\phi_a$  and  $\phi_b$ , therefore B is made by removing  $\phi_a$  from A and connecting it with some new factor.

Very similar criticisms apply to the doctrine that the manifest content of a dream is a distorted form of the latent content. Does the latent content coexist with the dream? If so, how can it be distorted? Or do you simply mean that the latent and the manifest content coexist, that the former is an important factor in the causation of the latter, and that the latter resembles the former in many important respects? The latter is the utmost that can be got out of the observed facts.

I think there is a very common but far from plausible assumption about ordinary memory underlying much of the psycho-analytic terminology. A memory is *prima facie* simply a cognition whose object exists at an earlier moment than itself. The object in general is not, on the face of it, mental at all, *e.g.*, when I remember the late Master of Trinity the object is a deceased human being who neither was nor is a state of my mind. Now when people talk of memories being 'stored-up' in the mind they always seem to forget this fact and to speak as if *remembered objects* were stored up. I imagine that all that is really stored up is some kind of trace which, in conjunction with some present stimulus, causes me to have a cognition whose object is the past event, person, or place. On this interpretation of memory the view that what is stored up resembles my conscious cognition of the object loses all plausibility. Even if it be essential to memory to be aware of an image which in fact resembles the object remembered, and even if images be mind-dependent, it remains certain that this *de facto* resemblance will not account for memory. It is not enough that the image should in fact resemble the object to be remembered; it must be *known* to do this. And there is no reason whatever to suppose that what is stored up is these images; for this is neither necessary nor sufficient to account for the simplest case of direct memory.

Thus I am inclined to think that the Introspective Theory, when carried to its logical conclusion, leads to a very different view from that with which we started. The unconscious and preconscious would consist of traces which we have no reason to suppose resemble any state of mind; for this reason they cannot be introspected. Some of these traces can co-operate with volitions to give memories of objects cognised in the past. Others cannot do this, and will only give rise to memories under the special stimulus of psycho-analysis. The former constitute the pre-conscious, the latter the unconscious. Repression is thus, not the forcible diversion of *introspection* from certain *states of mind*, but the forcible diversion of *memory* from certain *objects* which have been cognised in the past and have left traces.

*Threshold Theory.*—The view that unconscious states try to

'rise up' into consciousness and are 'pressed down' is, of course, metaphorical. But the metaphor does express certain observable facts which it is easy to indicate and difficult to analyse. An example is the curious way in which one seems to know a name that one is trying vainly to recall, and can tell perhaps how many syllables it has or that it does not begin with some suggested letter. I think that the threshold theory regards such experiences as being on the borderline of the conscious and the unconscious, and as giving an indication of what the unconscious may be like. I cannot attempt to analyse such experiences here and now; but I am inclined to think that a complete theory of the phenomena with which Freudians deal needs factors both from the Introspection Theory and from the Threshold Theory. I seem to be able to detect repressions in my own mental life, and they always seem to involve (i) a diversion of attention from certain objects, and (ii) at the same time a vague cognition of those objects in the sense of the Threshold Theory.

I must close this too long review by saying that Dr. Jones's book (in spite of some exaggerations, incident to his enthusiasm for his subject, which may 'evoke a smile in the young or a blush in the fair') seems to me to form an excellent introduction to psychoanalysis, and that it has persuaded me that no psychologist can safely neglect the Freudian school, whether he likes their conclusions or not.

C. D. BROAD.

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*Greek Political Theory: Plato and His Predecessors*. By ERNEST BARKER. London, 1918. Methuen & Co., Ltd. Pp. xiii, 403.

THOUGH Mr. Barker's work is, in a way, an expansion of part of a volume published as long ago as 1906, the process of revision and expansion has been so thorough that no apology need be made for treating the result as to all intents and purposes a new book. As such I hope I may be allowed to give it a very hearty welcome. I do not think it any exaggeration to say that Mr. Barker has written by far the best work yet in existence on the social and political side of Plato's philosophy, and that every reader will wait impatiently for the companion volume dealing with Aristotle and his successors. It is to be hoped that "the position of national affairs" will not delay the completion of Mr. Barker's labour of love very long. The great positive merit of Mr. Barker's treatment of his subject is that he has at last given us a work on Plato in which the *Laws*, far the most splendid and fruitful of all ancient contributions to the study of conduct, education, and social organisation, is adequately recognised and utilised as it deserves to be. The silly notion that Plato's *Laws* is a second-rate work, exhibiting symptoms of senile aberration which make it almost negligible to the student of Platonic philosophy, if it still survives anywhere, ought to receive its *coup de*

grace from the chapters in which Mr. Barker studies successively the general social and political theory of the book which Plato evidently designed to be his *magnum opus*, and its contributions to jurisprudence and the theory of education. As Mr. Barker is a philosophical tutor in Oxford, it is perhaps permissible to express a hope that his book may come to be regularly read for "Greats" and may put an end to the scandalous practice of keeping the Oxford Honours student, who is supposed to make Plato the foundation of his reading in ethics and politics, wholly ignorant of Plato's final and matured judgments on the deepest issues of practical philosophy. Mr. Barker has done specially well to append to his chapters on the *Laws* an excursus calling attention to the almost servile dependence of Aristotle's overrated lectures on *Politics* upon the greater work of Aristotle's greater teacher. I could only wish that Mr. Barker had allowed himself in this connexion to discuss the kindred point of the sources of Aristotle's ethics. It would have been easy to show that the Aristotelian *Ethics* is just as dependent as the Aristotelian *Politics* on the *Laws* and the *Politicus*, and that in respect of many things which are quite commonly treated by writers who should know better as "improvements" on the Academic doctrine. It cannot too often be repeated that Aristotle was not, as I used to be told (though I always took the liberty to doubt it), in my undergraduate days, a practical thinker bent on curbing the speculative extravagances of *idéologues*. The real truth is that it was Plato and the Academy who were the practical politicians, Aristotle who was (naturally enough in a man who was all his life an *ἀπολύς*), the *idéologue*. What really interested him was not legislation or the expulsion of the Carthaginian barbarian from Sicily or the diffusion of Hellenism over the East, but "theology" and cosmology. His *Ethics*, in particular, contains not one single thought which is not a mere reproduction of something to be found in the *Politicus*, *Philebus*, or *Laws*. In particular, the common notion that Aristotle somehow corrected the "one-sidedness" of the Socratic and Platonic doctrine that virtue is knowledge is due simply to ignorance. Better acquaintance with the way in which this famous (and true) doctrine is presented in the *Laws* is enough to show that there is not really a shade of difference on the point between Socrates, Plato, and Aristotle. Indeed no Greek moralist ever dreamed of denying that virtue is knowledge of the good, and that men only pursue "unreal" good because they mistakenly suppose it to be real. (Official Christianity, of course, maintains the same thing to the present day, when it ascribes the choice of evil to the "deceits of the world, the flesh, and the devil".)

My only criticism of the general line of argument in Mr. Barker's book would be that it is so good that it might easily have been better still. I mean that his appreciation of the importance of the *Politicus* and *Laws* is so sound that it should have led him a little further. He still, in my opinion, attaches an undue philosophical importance to the positions of the *Republic*, though he has less excuse for doing so than students of Plato who have fallen into mistakes

he avoids. He sees, in my opinion quite rightly, that the *Republic* is, comparatively speaking, an early work which must have been completed by the time Plato was forty, and that we have to allow for a preponderance of the dramatic over the philosophic in the earlier Platonic writings. Now it is very unusual to find that a philosopher of the first order whose life is prolonged as Plato's was reaches his most important results by the age of forty. What would be left of the work of Descartes or Kant, for example, if those philosophers had died at forty? Berkeley's best-known works, indeed, were published at a much earlier age, and Hume's *Treatise* was written before the author was twenty-five. But Berkeley's thought in his youthful works is marked everywhere by a pretty patent want of maturity, and Hume spoiled himself as a philosopher by his neglect to prosecute real metaphysical reflexion after the literary failure of the *Treatise*. It seems, moreover, rather arbitrary on Mr. Barker's part, after recognising in principle, as he does, the genuinely Socratic character of Plato's earlier dialogues, to decide for no apparent reason that the positions taken up by Socrates in the *Republic* must all be treated as the personal convictions of Plato. One cannot help wondering whether Mr. Barker has not a little illogically shrunk from the consequences of his own admissions, perhaps from an unconscious desire to conciliate the sort of Oxford tutor who objects to what he amusingly calls the "St. Andrews school" because he knows that if they are right he will have to reconstruct his lectures. No one supposes that Plato is personally bound by all he puts into the mouth of Protagoras or Hippias; why should we assume that the case is different in principle with what he puts into the mouth of Socrates? It is different when the speaker is anonymous, like the Eleatic of the *Sophistes* or the Athenian of the *Laws*. As these speakers are not put before us as known historical persons, we have not here to reckon with the necessity of making them speak in conformity with their known views and known manner of utterance. *They* may fairly be taken to commit the author who has made them the leaders in a philosophic discussion, unless he has given positive indications—as Plato has not done—that they are not speaking on his behalf.

My chief reason for dwelling on the point is that I think the assumption that Socrates, in the *Republic*, = Plato leads Mr. Barker to some misapprehensions on two rather important points. He is very much in earnest with the view that the social scheme of the *Republic* is one in which Plato, at the age of forty, personally believed in all its details and that Plato seriously proposes it as immediately practicable. I can see no ground for either assumption. Of course Plato must have been at one with the general spirit of the proposals of Socrates in the *Republic* or he would not have written the dialogue. But this does not warrant our holding that every detail of the programme put forward by Socrates in a dialogue so richly dramatic must have commended itself to Plato, even at the moment of writing. As for the view that the Callipolis is no

"Utopia" but a scheme intended to be put into practice as it stands, the *Republic* itself seems to me to prove the very opposite. Mr. Barker strangely appeals for proof of his thesis to the passage in which it is proposed by Socrates to get over the difficulty of effecting the "social revolution" by "rusticating" all citizens of more than ten years old and so getting a free hand to work on the rising generation. Surely Mr. Barker has forgotten, as the pedants of whom he is not one regularly do, that there was "lots of fun in" Socrates. It is just this very passage which, more than any other, *proves* that Socrates himself does not really look upon his Callipolis as a Marxian looks on his "socialistic community".

I think the same unwillingness to recognise the dramatic character of the *Republic* partly accountable for what seems to me Mr. Barker's partial failure to understand the point of the severe satire on *δημοκρατία*. Mr. Barker, of course, admits that the defects noted by Socrates are defects to which "democracy" is prone, and he has a good deal that is suggestive to say on the other side about ways in which they may be minimised and about the good points in "democracy". I do not myself suppose that Plato at any time of his life would have denied the truth of most of what Mr. Barker urges against him. But he might have said, and with justice, that none of these considerations are in the least germane to his indictment of *δημοκρατία* in the *Gorgias* and *Republic*. For what is attacked there is a very special and peculiar thing which it would be strange that any philosopher should not oppose. The attack is not on "popular government" as such but on the *δημοκρατία* of Athens during the Peloponnesian War. Now Mr. Barker seems not to have made it quite clear to himself what the really objectionable feature of *this* specific "democracy" was. What it was he will see if he asks himself "where did the plenitude of sovereignty reside in the Athenian constitution?" It resided, of course, in the Heliaea, and this is just why Solon who created the Heliaea and Pericles who made them "democratic" by paying the citizen dicasts are always thought of correctly as the two men most directly responsible for the character of the Athenian constitution. The real evil, inseparable from the democracy after Pericles, was that, owing to the rule that an outgoing magistrate must pass his *εἶθονα* to the satisfaction of a paid popular court, every one who took any part in public life at Athens risked his citizen rights, his property, even his life, if he adopted any measure which might be resented by a popular "jury" who were judges of the law as well as of the fact, had no rigid rules of evidence or procedure, and were to a considerable extent also free to determine the penalty in case of conviction without any possibility of having their decision modified by a "prerogative". The terms on which statesmen undertook office in our own country in the reign of Charles II. were bad enough, but never so bad as this. Halifax or Danby or Shaftesbury had always to reckon with the possibility of impeachment, or Bill of Attainder, but even the iniquitous proceedings on Bill of Attainder were not quite so unfair to the politician who had provoked general

animosity as prosecution before an Athenian dicastery, and the royal prerogative could be used to protect the attainted from the full fury of his enemies, as it should have been used by Charles I. for Strafford and would probably have been used by William III. for Fenwick but for the folly of Fenwick himself. In fact trial for political short-comings at Athens can only be compared with trial before a "Soviet". Of course so long as a man of the personal qualities of Pericles was at the head of the administration the full iniquity of the system could be undetected, but the history of the Athenian democracy in its behaviour to its public servants under the régime of the vigorous but coarse and brutal "leaders of the *ἄνθος*" who succeeded Pericles seems to me to bear out to the full everything which the *Republic* and *Gorgias* say about the tendencies of what those dialogues call *δημοκρατία*, the "sovereignty of the *canaille*". *δημοκρατία* with a "fundamental law," such as we read of in the *Politicus* is, of course, a different thing, a form of the "sovereignty of law," and it indicates no change of mind in Plato that he should judge it more favourably. There is no reason to suppose that, to the end of his life, Plato had more than one opinion about *δημοκρατία* as practised in Athens under the guidance of Cleon or Hyperbolus.

I note one or two other failures of insight in the discussion of the *Republic* which would not surprise me in most writers about Plato but do surprise me a little in Mr. Barker. I see, for instance, that he is among those who gravely censure the unfeeling harshness of Socrates' observations about valetudinarians. He forgets that the fury of Socrates is part of his humour; he is amusing himself by denouncing the selfish *malade imaginaire* much in the style of Dickens's Boythorn, and must not be taken to be much more serious than Boythorn was in his frequent proposals of heroic measures to be taken with bores and nuisances. If Mr. Barker will read and reflect on the Hippocratean *περὶ διαίτης* γ, he will see that the explanation of the assumption that the "working-man" only puts himself "in the doctor's hands" when things are desperate is simply that in the Socratic age there was an excellent literature of guides to self-regulation in matters of hygiene intended to be used by the very class of persons of whom Plato is speaking. So again I suspect Mr. Barker misses the real point about the "infanticide" in the *Republic*. Permission to Platonic guardians of over 55, after life-long training in *σποδομένη*, to enjoy the company of ladies of over 40 who had also been guardians, without State-supervision would not be likely to be abused—(may I protest against the nonsense of Prof. Woodhouse who has just described this permission in vol. x. of Hastings' *Encyclopædia of Religion and Ethics*, art. PROSTITUTION (Greek) as license for "promiscuity," and if it were, would not be very likely to lead to "consequences"). Even in our own climate ladies do not commonly have "additions to their families" after the age Plato specifies, and the thing would be more unusual still in a Mediterranean country. Plato obviously means simply to allow the guardians of both sexes the comfort of a



little domesticity in their declining years, a fireside and a companion; the "offspring resulting from the arrangement" may safely be doomed to "exposure," since the chances all are that there never will be any to "expose". The moral character of the parties is one guarantee against abuse of the freedom so tardily granted them, and besides this their age has to be allowed for. If I might mention a few minor points on which I think Mr. Barker might reconsider his views, I should like to suggest that it cannot well be true that Sparta is aimed at in the description of the "oligarchical state" in *Republic VIII*. The kind of community meant is obviously a great commercial city in which the merchant-princes control affairs, like Venice or Amsterdam in later times. What particular city Socrates may be supposed to have in mind is not clear,<sup>1</sup> but it can hardly be Sparta, which never had either commerce or "merchant-princes". I doubt also whether the account of the "tyrant" owes much to the career of Dionysius I. We must remember that Socrates is supposed to be speaking somewhere about 425 B.C., and it would be an anachronism to put into his mouth expressions which require to be understood in the light of events that only happened long after. So far as I can judge, the "historical allusions" are mainly to the story of Peisistratus. The *character* of the tyrant, which does not correspond to any estimate Plato is likely to have formed of Dionysius, is shown by comparison with the *Gorgias*, to be largely reminiscent of the most famous autocrat of Socrates' day. Archelaus (also, I believe, alluded to under the transparent disguise of "Ardiaeus the Great" in the "myth of Er").

I am glad to see that Mr. Barker is ready to be convinced about the genuineness of the *Epinomis* and *Epistles*. He does not however fully appreciate the importance of the fact that the *Epistles* were included as a body in the earliest "edition" of Plato known to us, that of Aristophanes of Byzantium. This means that, like the *ἐπιστολαὶ Παύλου*, they came into the Canon as a whole, not as separate items. It is uncritical to reason as though we had to regard each "epistle" simply on its own merits. It is the collection as a whole about which we have to decide whether its presence in the "Canon" warrants a belief in its genuineness. If this question can be answered affirmatively, then only the strongest internal evidence of non-Platonic authorship can justify the rejection of any one item. (In my own opinion we have this internal evidence only in the case of *Ep. I.*, but this must be regarded not as a forged "letter of Plato" but as a genuine early fourth-century document connected with Sicilian affairs, and for that reason included from the first in the Platonic correspondence.) As for the *Epinomis*, I think that if Mr. Barker will go into the facts he will discover that the only person in antiquity who ever doubted its authenticity was Proclus and that Proclus doubted, in defiance of unanimous tradition, on two grounds, one of which is worthless and the other makes very strongly for the dialogue. The modern "athetizers" give no

<sup>1</sup> Carthage.

reason at all for their attitude, and I suspect that some of them have not even read what they reject.

I should like to explain what I feel sure is the reason for the selection of 37 as the number of Plato's nocturnal Council. Ritter—pace Mr. Barker—is obviously right in saying that the 37 are 36 + an odd person added to prevent any decision from being carried on an even division of the votes. But why 36 rather than 24 or 48 or any other multiple of 12? Any one conversant with the remains of the Pythagorean arithmetic will see at once that the reason is that  $36 = 6^2 = 1^2 \times 2^2 \times 3^2 = 1^3 + 2^3 + 3^3$ . *I.e.*, 36 is not only the "square" of 6, the first "perfect number," but also the product of the three first "squares," and further the sum of the three first "cubes". (This last point was thought to have considerable embryological significance, as may be seen not only from the *Theologumena Arithmetica* but also from the *περι σαρκῶν* of the Hippocratean corpus.) Our information about this number-lore comes primarily, to be sure, from post-Christian Neo-Pythagoreans, but it is really quite easy to prove that the bulk of what they tell us goes back at least to the time of Socrates' friend Philolaus, if not to Pythagoras himself. Plato, as readers of the *Republic* know, had all this at his fingers' ends and liked to play with it in a half-serious fashion. Similarly no Pythagorean or Academic would have found the selection of 5040 as the number of citizens for the colony of the *Laws* as arbitrary as Mr. Barker seems to think it. Speusippus or Philolaus would have thought it obviously right, if you wanted a number with many divisors, to get it by securing one divisible by all the integers *ἐντὸς τῆς δεκάδος*, which was regarded as the natural "period" in numeration, and to secure this by taking the continued product of the numbers from 1 to 7 (the highest

prime number < 10). In point of fact  $\frac{5040}{2}$  or 2520 would also

have the property of being divisible by every integer not greater than 10, but Plato, as a mathematician, wants a number which is formed *symmetrically*.

Mr. Barker's humour fails him, for once, over the *Menexenus*; of course the *Menexenus* is genuine. It is simply lack of humour which has led to doubts about it. It is a skit, and a very good one, on professional patriotic oratory, as Sir A. T. Quiller-Couch has recently explained. Germans and persons of the Germanic habit of mind are sadly perplexed by its ludicrous chronological blunders. How could Plato make Socrates talk of the events of 387? In point of fact, he has done worse; it is *Aspasia* whose speech Socrates professes to be repeating, and the supposed date is not long after the famous *ἐπιτάφιος* of Pericles for the victims of the first year of the Peloponnesian War! Of course this is intentional. The "jelly-bellied flag-flapper" is not usually strong on accurate chronology and it is his style of oratory which is being caricatured. Again, say the Germans, some of the reasons given for being proud

of your country are quite good, others are quite bad. What can we make of the work if we can neither regard it as all caricature nor as all earnest? If one has an eye for irony one ought to be able to understand without being told that even the "flag-flapper" does mix up some respectable reasons for patriotism with the discreditable ones and that any good caricature of his style of oratory must reproduce and accentuate the mixture. The argument that Athenians ought to make it a reason for admiring themselves that they have always hated the "barbarian" so bitterly is, of course, one of the bad reasons, and it is Plato's characteristic irony to mix it up with worthier topics. Mr. Barker really ought not to have worried himself with the question what light the remark throws on Plato's opinions about "barbarians"; he ought quietly to enjoy the art of the suggestion, as Plato meant he should.

I take it a reference to Samos (!) as the home of Protagoras is a mere slip of the pen, or perhaps the result of an "association by similarity" of the names Protagoras and Pythagoras. It is no doubt also a mere oversight that Zeno's invention of dialectic is ascribed in passing to Protagoras, who, according to Plato, came badly to grief the moment Socrates began to try "dialectic" upon him.

I trust these observations will not be understood as intended to detract in the least from what I have said about the very great excellence of Mr. Barker's fascinating study.

A. E. TAYLOR.

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*The Individual Delinquent: a textbook of Diagnosis and Prognosis for all concerned in understanding offenders.* By WILLIAM HEALY, A.B., M.D., Director of the Psychopathic Institute, Juvenile Court, Chicago; Associate Professor, Mental and Nervous Diseases, Chicago Polyclinic. London: Heinemann. Pp. xvii, 830.

It is difficult to speak too highly of this book, and that whether we think of its contents or of its methods of analysis and exposition. It is one of the best of the fine series in which it occurs—the Modern Criminal Science Series, published under the auspices of the American Institute of criminal law and criminology. This series has been devised with the catholic readiness of America in this branch of scientific practice to ascertain direct from the rest of the world what the experts have thought and said. But as one scans the various volumes, for example, Garofalo's *Criminology*, Tarde's *Penal Philosophy*, Lombroso's *Crime, its Causes and Remedies*, Gross's *Criminal Psychology*, De Quiros's *Modern Theories of Criminology*, Saleille's *Individualisation of Punishment*, one cannot help feeling every here and there that, in criminology as in so many other departments of civil practice, the broad generalities are strained by every ingenuity to cover what the refractory conditions

of the actual world appear to need for its preservation from something named "crime" and some individual named "criminal". In these admirable works, which, in a large proportion, have been wrought out of hard facts of experience, the philosophical student is forced into the middle of the old controversies about free will, responsibility, personal identity, modified in a hundred ways by modern views of the organism, heredity, and many other biological and sociological generalities. These all are fascinating; but their relevance in the world of criminology rests on the need for finding a coherent ethical reason for the practice of sending murderers to the scaffold or guillotine and delinquents of lesser grade to the appropriate prison or institution. The theories of crime and the criminal are as various as the philosophies invoked to justify them. But at present more than ever in the modern world it is essential to apply scientific method to the complicated facts. In the present treatment of delinquency, especially of juvenile delinquency, the misfits exceed the fits by a big proportion. It is the virtue of Dr. Healy's book that it prepares a scientific ground-work and keeps scientific throughout. There is no attempt to apply one sole principle to all types of case, nor is it admitted anywhere that there is one sole principle that will apply. His effort first and last is to secure an adequate analysis of the individual. The result is a textbook of the highest value both in method and in materials. "Out of deep consideration of hard-won facts this work is produced. In view of the failure of the past and of the present effectively to handle anti-social conduct, and in the light of the enormous expense of criminality, standing in striking contrast to recent progress in many other fields of human endeavour, there seems the utmost justification for research work in the underlying causations of delinquency" (p. 3). And again: "Of general theory there is no lack, but when we come to that study of the individual which leads to clear understanding and scientific treatment, there is almost no guidance" (p. 3). This is at once a severe comment on current speculation and a conclusive justification for the book.

Dr. Healy uses the terms "crime," "delinquency" as "overlapping and practically synonymous terms". The individual delinquent may be either a young offender or an older criminal. "The criminal is a person found guilty of a crime." Because "knowledge of growth processes is always important for understanding the fully developed state," the study of the beginnings takes first rank. But the delinquent's character, being the result of growth, is "the product of forces as well as the sum of his present constituent parts" (p. 4). He must be studied "dynamically as well as statically, genetically as well as a finished result." How fruitfully this conception is applied, only a detailed study of these eight hundred and thirty pages could demonstrate. It is quite impossible to give any sufficient impression of the wealth of material and analysis. Delinquency is not synonymous with abnormality. "Such statements as 'Crime is a disease,' appear dubiously cheap in the light of our experience" (p. 4). The task

has been less the gathering of material for justifications than the ascertaining of methods and facts "that will help towards the making of practical diagnosis and prognosis" (p. 4). But, incidentally, this severe restriction to practical ends is mediated by a comprehensive study and knowledge of all the leading authorities of every problem revealed in the close study of the many cases. The result is a book that should appeal not to parents alone but also to "teachers, pastors, and physicians, to whom the laity go so frequently for advice on mental and moral questions" (p. 6). But "the foundations on which delinquent careers are built . . . are not taught as yet in theological and medical schools, and are only just finding a place in psychological departments of universities and teachers' colleges. It would seem, however, that the phase of applied psychology which has to do with human behaviour should be essential in all these disciplines" (p. 6). Dr. Healy urges the need for instruction of all those concerned with the management of criminals. "As a basis for supplying a vaguely felt need for individualisation of treatment in institutions, comprehension of the genetics of misbehaviour is a prime necessity." His problem, therefore, is to show by a clear-minded application of specially designed methods of analysis, how we should endeavour to understand the beginnings and foundations of misconduct in general. "Only through logical, scientific study of the individual can there be any reasonable expectation of amendment of most delinquent careers" (p. 8).

The volume is built up of two books: one containing general data—orientations, nature of individual, mental bases of delinquency, working methods, statistics, conclusions, treatment—ten chapters; the other, containing discussions of heredity, factors in developmental conditions, abnormalities, stimulants and narcotics, environmental factors, professional criminalism, mental imagery, mental conflicts and repressions, abnormal sexualism, epilepsy, mental abnormality in general, mental defect, mental dullness from physical conditions, psychic constitutional inferiority, mental aberrations and peculiarities, pathological stealing, pathological arson—twenty-seven chapters. It is obvious that very little in the enormous range of delinquency in the widest sense escapes consideration, or illustration, and the documentation is based on nine pages of bibliography. Yet the whole book is so well composed that it does not contain a dull or irrelevant page. What I like best about it is that every generality is brought to the test of a case or cases. The facts, carefully analysed and recorded, are made to tell their story. The whole is predominantly a study in the psychology of crime and the book will take its place among the "indispensables".

The deliberate plan of the work is—"to ascertain from the actualities of life the basic factors of disordered social conduct" (p. 9). The data limiting the field of study include the following propositions: repeated offenders (recidivists) have, by their numbers and the seriousness of their offences, the greatest significance for

society; practically all confirmed criminals begin their careers in childhood or early youth; the determinants of delinquent careers are the conditions of youth; in youth prime causative factors stand out much more clearly than they do later; knowledge of developmental conditions is important; data about family traits, early characteristics and environment may be worth much for explanation of the offender's tendencies; disingenuousness of the offender is a barrier, and, therefore, for whole groups of causes, it is important "to approach the delinquent in the years of naivete"; the best rewards of therapeutic efforts are from working with youth.

Of methods all that need be said is that they are carefully elaborated to suit the individual problems. The psychological methods include specialised mental tests. "It seems clear that the fundamental basis of standardisation must be comparisons of efforts of individuals who have done their best. All else is secondary; measurement of quantities, qualities and time of work presupposes this best effort. If the best was not obtained, then evaluation of output, since we desire to predict, is of little value" (p. 72). There are tests of the levels of general intelligence—modified Binet tests; tests for school work, special capacities, such as memory powers, ability to give testimony, attention, motor co-ordination, associative processes, perception of form and colour relationships, ability to profit by experience, suggestibility, will-power, apperception, moral discrimination. Psycho-analysis is freely used. "The whole structure of the psycho-analytic method rests upon one foundation—that for explanation of all human behaviour tendencies, we must seek the mental and environmental experiences of early life. If one traces back the driving forces of conduct in any normally minded individual, one finds their first springs so far away that the intervening links of relationship are not quickly perceived. Up through the aisles of time the mental individual has progressed by steps that are now forgotten, and by paths which may have been dimmed to consciousness in the passing. The psycho-analytic method, first and foremost, invokes retracing the steps which progressively formed the whole character; hence it bespeaks utmost value for students of social misconduct" (p. 116). It is well to have this sane deliverance on a method that has evoked so much futile virulence in controversy. In another connexion it is said: "No doubt the exploration, or bringing clearly to the offender's mind the innermost cause of his mistendencies, is the greatest single step towards a cure, but most often that is not enough" (p. 355). But I have said enough to show the immense value this book has for the educational psychologist.

Out of such wealth of suggestions, criticisms and concrete cases, it is difficult to select points for comment. One or two results are too striking to be missed. After a careful analysis of 152 cases, where the study was "centred on the problem of the direct inheritance of criminalistic tendencies as such" (p. 153), Dr. Healy concludes: "Altogether there seems to be no proof whatever from

our extensive material that there is such a thing as criminalistic inheritance apart from some otherwise significant physical or mental trait, which, in the offender and his forebears, forms the basis of delinquency" (p. 154). This, it is hardly too much to say, is the most important proposition in the book. Dr. Healy does not question the inheritance of conditions that, in a given environment, easily lead to criminality; what he does deny is the direct inheritance of criminalism as such. In all the cases where the investigators could come to close quarters with the family and individual history, inheritable defects, such as epilepsy, feeble-mindedness, instability, etc., were frequent; but we gather that the "criminal as such" is a fiction due to over-ready generalisation. "When we come to study cases more fully, we see no reason for maintaining any general notion that there is a class properly designated as born criminals" (p. 781). And again: "Nothing is gained by loose generalisation on the subject. There is much food for thought in Devon's keen statement that 'the criminal is born and made just as a policeman is born and made'. Certain mental and physical qualities lead in certain definite directions of behaviour if society allows the chance" (p. 782). The discussion of moral imbecility and moral insanity is among the acutest criticisms of the research. The chapter on Heredity, (pp. 188-200), developed and checked by the incidental discussions in other parts of the book, deserves the most careful study both of the psychologist and biologist. It is manifest that the difficulty of proving inheritance of criminalism is much greater than the ordinary criminologist realises.

Space forbids comment on many other problems here brought to the test—deliberate choice in criminalism, the nature of the mental imagery among criminals, the effects of repression in inherited hyper-sexualism, various types of mental defectives, the effects of alcohol and other drugs, which are frequently symptoms of pre-existing defect, the amnesias, the forms of paranoia and other insanities, the special effects of treatment, the futility of certain punishments, etc. If I were asked to recommend a well-loaded textbook as a guide to the study and treatment of the criminal, Dr. Healy's volume would be among the first that I should recommend.

W. LESLIE MACKENZIE.



## VII.—NEW BOOKS.

*The New Physiology, and other Addresses.* By J. S. HALDANE, M.D., LL.D., F.R.S. London: Charles Griffin & Co., Limited, 1919. Price 8s. 6d. net.

DR. JOHN HALDANE has thrown together into a book six essays or addresses which he has had the good fortune to deliver to important audiences—to audiences both influential and varied, such as the British Association, the Harvey Society of New York, the Edinburgh Pathological Club, and the Aristotelian Society. All these essays deal, directly or indirectly, with Dr. Haldane's views regarding the fundamental concepts, or 'categories,' of biological science, the manner or degree in which biological investigation approaches towards 'reality,' and, by consequence, the question whether contact has been reached, or is still only to be desired, between (for example) experimental physiology and practical medicine. I say, these essays have been thrown together into a book, and I don't think the phrase is either misplaced or severe. They all, or practically all of them, say the same thing, in words which vary little; and the same illustrations, drawn from the phenomena of respiration or excretion, repeat themselves in one chapter after another. These illustrations, from Dr. Haldane's point of view, are doubtless strong and good, but we get a little tired of them before we are done.

Dr. Haldane avows himself, courageously, as a reformer; he is a hard critic of the scientific methods of our day; and he acknowledges that he represents a 'minority,' but whether that minority be large or small he does not tell. In some cases Dr. Haldane's views have already been earnestly, even elaborately opposed; but there is not a word in this book concerning any replies that have been made to him, any attempts to rebut his arguments or refute his conclusions. The question raised in the last chapter of this book, 'Are physical, biological and psychological categories irreducible?' is one which was discussed and argued at great length in last summer's 'Symposium'; it is all one to Dr. Haldane. He abates no jot or tittle; he says again precisely what he said before. But this is not the place or the occasion to recapitulate that argument, nor is it, save now and then, a reviewer's business to try to controvert his author. I am quite content to do no more, or very little more, than attempt to describe Dr. Haldane's general attitude, to express my dissent, and to do so with as little show of prejudice as I can.

This much may certainly be said, to begin with, that a good deal of what Dr. Haldane has to say is such, and is so said, as to disarm criticism and to invite our hearty approbation. Dr. Haldane's 'conception of the aims and duties of a physician is a fine and an exalted one, and with it I heartily agree. For Medicine is one of the greatest of the Arts; it studies Humanity, it has its spiritual side; and the physician by the bedside may at all times say, 'Behold, I show you a mystery'. Dr. Haldane tells us, and it is not to be denied, that 'there is a subtle barrier between practical medicine and the teaching of preliminary sciences'. He points

to the contrast between the textbooks of physiology, in which one 'finds an account of the mechanical and physical aspect of each bodily process taken separately,' and the somewhat vague but infinitely complex problems which confront the physician. There is a 'human physiology' which transcends the present teaching of the schools; and we rely, under the old symbolic name of a *vis medicatrix*, upon agencies of which our microscopes teach us little that is certain, and less that is adequate. He says hard things both of the modern physician and of the modern physiologist. He talks of 'the pompous ignorance of physiology and pathology which one meets so often among medical teachers in Europe'; he says that 'we shall soon be left behind in the medical sciences unless we can introduce radical reforms'. If he says hard things of the physician and of the physiologist, he has harder still to say of the anatomist, 'who has sold his scientific birthright for a sorry mess of systematic pottage'; and harder still, if it be possible, of the pathologist and of the pharmacologist. But he has guidance to offer as well as criticism; his advice is clear and practical; and when he reminds us, for instance, that the old Scots description of Physiology was 'the Institutes of Medicine,' he is enforcing a lesson which we had better remember, but are apt to forget. I have no quarrel with him when he asserts that 'practical medicine is based on a teleological conception of the working of the body,' a fact which is enough to explain or to excuse what lack there be of living contact between the science of the physiologist and the art of the physician. All in all, I like the essay on 'The Relation of Physiology to Medicine' the best in the book.

The greater part of the little book is taken up, in one way or another, by statements and re-statements of Dr. Haldane's cardinal position, that the growth and maintenance of the organism are not to be comprehended by the laws of chemistry and physics; that 'in physiology and biology generally, we are dealing with phenomena which, so far as our present knowledge goes, not only differ in complexity, but differ in kind, from physical and chemical phenomena'; and that 'the fundamental working hypothesis of physiology must differ correspondingly from those of physics and chemistry'. In maintaining this position, Dr. Haldane makes free use of the great concept of 'teleology,' a concept which modern science, and science ever since Bacon's day, has done its best to dispense with—though by means necessarily to deride. As a friend said to me the other day: 'It is not that we *deny* design in Nature, for that would be as unphilosophical as it would be presumptuous; but we no longer think we *discover* it'. But whether Dr. Haldane would countenance the word 'design' or not, he certainly maintains, not as a mere working hypothesis but as an essential criterion of biology, a teleological principle in physiology, by virtue of which 'regulation' is effected, a 'normal state' is maintained—and all goes well. He may avoid, at times, the use of the word 'teleology': as, for instance, when he says that 'Lavoisier's discoveries [when he compared the output of heat with the consumpt of oxygen in the body] did nothing in the direction of reducing to physico-chemical terms the *apparent teleological, or, as I should prefer to say, "physiological"* element in the phenomena of animal heat'. He is satisfied that 'the lung ventilation is regulated in accordance with the *requirements* of respiratory exchange'; and, again, that 'the blood-supply to various parts, like the air-supply to the lungs, is in reality determined by physiological *requirements*'. In short, the Aristotelian *τέλος* dominates the situation. A certain result, not only the maintenance of 'life,' but the maintenance of a 'normal' condition, has got to be attained; it is the *τέλος*, the 'final cause' (though that word Dr. Haldane never employs), and attained it is. That that is so, is the first if not the last word

of 'the New Physiology'. The 'normal' is a very subtle thing; it is 'the condition in which the organism is maintaining in integrity all the interconnected normals which manifest themselves in both bodily structure and bodily activity'; and 'the maintenance of the normal is something for which there is no place in the mechanistic physiology; since according to this physiology maintenance must be in ultimate analysis only an accident of structure and environment—a fitful will-o-the-wisp, which does not concern true science'. And, lest I misinterpret Dr. Haldane, or lest I represent him insufficiently, let me quote one passage more: 'The normals of a living organism are no mere accidents of physical structure. They persist and endure, and they are just the expression of what the organism is. By investigation we find out what they are, and how they are related to one another; and the ground axiom of biology is that they hang together and actively persist as a whole, whether they are normals of structure, environment, or life-history. In other words, organisms are just organisms, and life is just life, as it has always seemed to the ordinary man to be. . . . The attempt to analyse living organisms into physical and chemical mechanism is probably the most colossal failure in the whole history of modern science.'

There is no mistake about it. Dr. Haldane is in open revolt, and what he desires is a revolution in physiology.

But Dr. Haldane is much less clear when he tries to explain to us his reasons for discontent, and to my thinking he is not clear at all as to how the working physiologist should amend his ways and seek salvation. Dr. Haldane's own work is based, just like other people's, on careful and meticulous physical admeasurement and chemical analysis; but he finds that these methods, or these sciences, do not take him so far as he would go, do not even lead him to a useful and practical end. That they have played him false he does not say; but that they have failed to satisfy his wants he indicates again and again. He finds that progress along the old familiar lines is slow; he doubts the science of the orthodox; he despairs of the teaching of the schools. I begin to think of a certain 'stile that led into a meadow, on the left hand side of the way'; and of certain men who, because the way was rough in that place, chose to go out into the meadow. For Dr. Haldane seems curiously impatient. He knows, and no man knows better, that the physiologist has done great things by the help of chemistry and physics, and has made many a fundamental point clear which was before utterly obscure. But he seems to me inclined to forget that all this work is but the work of a very few score years, of a few short lives of men. And though we might all confess that now and then a physiologist has been apt to claim more for his science than it has yet actually achieved, yet I think that, on the whole, the biologist is just as well aware as most men that he is still only 'picking up pebbles on the shore'. To revolt against the whole accepted concepts of his science because its results are far short of what we might desire, to advise the physician to be content (as anything other than the merest temporary measure) with a *vis medicatrix*, the anatomist with a *vis sculptrix*, the physiologist with a *vis directrix* (as Dr. Haldane in each case would have us do), is mightily like a return to mediævalism, and a going aside into the meadow, from 'the right way which was rough'.

The real fact is, or so it seems to me, that Dr. Haldane is in revolt with much more than the tenets and the methods of the modern biologist; it is a larger philosophy that he has in mind, and his challenge is to the world. He admits that his conception of biology is 'inconsistent with the physico-chemical conception of the universe'. But his conclusion appears to be—so much the worse for our physico-chemical conceptions of the universe. He 'confidently predicts' (and herein, as it seems to

me, there lies the very essence of his philosophy) that if a meeting-place between physical science and biology be some day found, and 'one of the two sciences be swallowed up, that one will not be biology'. He asks us 'What is reality?' and reminds us (somewhat needlessly, as I venture to think) that 'scientific generalisations represent, not reality itself, but only certain aspects of it'. 'They are the tools with which we fashion the world of sensuous appearance, and in the fashioning of it reveal its spiritual reality'. Of all this I would not gainsay a word; but as a working biologist, it does not help me at all. I have read this book all through; and in the end I resolutely decline to be fobbed off (for that is the only word I can think of) with either a *vis sculptrix* or a *vis directrix*, or even with a concept of 'teleology' as a working hypothesis, a guiding clue through the labyrinths of natural phenomena. The physiologist is not ignorant of the fact that it is not Reality which he studies, but only a certain aspect of reality; nevertheless, that aspect is *his* aspect, and within it his *métier* lies. Dr. Haldane writes up at his stile, 'This way to Reality'; but I will not travel through his meadow till he has set up a few further sign-posts, and some milestones by the way.

In some things biological I also am inclined to be a heretic, and certain of my doubts might alarm and horrify Dr. Haldane himself. He seems to me to have no doubts whatever as to (for instance) the 'cell-theory,' or the main principles thereof; it is, indeed, the very fact the cell-theory renders a 'mechanical explanation' of the whole organism so superlatively complex that seems to me to form one of Dr. Haldane's chief arguments for rejecting the mechanical concept. How far I am inclined to doubt, or even to reject the 'cell-theory' (as commonly understood) is neither here nor there; but I am entirely willing to look upon it as a 'temporary hypothesis'. But I am not willing to reject as a fundamental concept of experimental science, as a working hypothesis of the physical universe, the concept of mechanical causation. This, unless I grossly misunderstand him, is what Dr. Haldane bids me do; and I protest, if only in an evasive answer, that it is not biology which he is trying to reform, but the current thought of the world.

D'ARCY WENTWORTH THOMPSON.

*A Realistic Universe, An Introduction to Metaphysics.* By JOHN ELOF BOODIN. New York: The Macmillan Co., 1916. Pp. xxii, 412.

Prof. Boodin's Preface tells us that "this volume on metaphysics is the sequel of a volume on the theory of knowledge, entitled *Truth and Reality*, which was published in 1911. The two volumes furnish a survey of the field of general philosophy from the point of view of pragmatic realism." Its attitude is "an attempt to apply scientific method to philosophic problems," and "the pragmatic method as applied to metaphysics means that we must judge the nature of reality . . . by the consequences to the realisation of human purposes, instead of by *a priori* assumptions". From his introductory chapter we learn further that metaphysics, since to philosophise we must think, implies that there are valid rules of thought, and "a faith in their fitness or relevancy to our world" (p. xv). Unlike Mr. H. G. Wells, he entertains no 'scepticism of the instrument,' but thinks "we must trust the instrument at the outset," which is "fundamentally an attitude of the will". So "somehow the laws of thought must be the laws of things," but they "must be tested by their success in actual use" (p. xvi). So our "faith in the relevancy of thought," must be confirmed. Similarly, though philosophy "exists in part for ennobling life," and "must satisfy our emotional and volitional nature, as well as

our intellectual," it is yet "science not art," nay "the oldest of the sciences—the mother of science". Actually, however, Prof. Boodin's method is to attempt to solve the problems of metaphysics by selecting five scientific conceptions now current, and following them whithersoever they lead. These he believes to be irreducible into terms of each other (p. 385), and regards as "the *summa genera* in the reflective evaluation of the character of the world" (p. 391).

His list is composed of (1) *Being*, "the stuff-character of reality"; (2) *Time*, "the flux-aspect" of reality; (3) *Space*, which is "more than a conceptual limit," since "interstellar space seems to be practically pure"; (4) *Consciousness*, since "it is absurd to suppose that our conative attitudes and organised meanings become atoms and molecules when we are not aware of them," and which is conceived as "a neutral light," that "does not create distance nor does it create meaning" (p. 399), and is "always an aspect of the situation which we call *interest*" (p. 400); (5) *Form* or *direction*, which raises the question of validity, and "must somehow condition the survival of structures" (p. 403).

Now it is evident that a method like Prof. Boodin's has very considerable attractiveness. To make the achievements of modern science relevant to the secular perplexities of philosophy gives to metaphysics an air of solidity in which its fine-spun speculations have usually been lacking, even though Prof. Boodin's five categories may look to some like five bluebottle flies caught in a web of gossamer, and suggest a doubt whether it can sustain such weighty bodies. However, Prof. Boodin writes with a refreshing sense of realities, and with a praiseworthy clearness and directness of style, and is withal so good tempered and tolerant about his metaphysical selections (as a genuine pragmatist should be!) that he very effectively disarms his critics. Hence the remarks that follow should be taken less as objections than as inquiries and cues for reflexion.

So long as a philosopher shrinks from undertaking the (probably futile) task of 'deducing' his categories and supplying a rigid proof (almost certainly impossible) of their ultimateness, he cannot in reason require every one to approve of his selections, and has in principle to admit that as systematic, impressive and satisfactory structures can be erected out of different materials as out of a different arrangement of the same materials. Tastes differ in metaphysics as in love, and Prof. Boodin's 'Big Five' do not appeal to every one. Thus 'Being' has seemed pretty null and void to others besides Hegel. Moreover, 'Value' penetrates it, transforms it, and perhaps finally absorbs it. 'Change' is the presupposition both of 'Space' and of 'Time' and pervades them both; it seems clear that the experience thereof is far more ultimate than the abstractions out of which we build up our scientific conceptions of Space and Time. 'Consciousness' is either mere philosophic jargon, or the thinnest possible abstraction from concrete personality, while the latter may be found in ultimate analysis to be as all-pervasive as 'Value'. 'Form' is a category which it was natural for the artistic craftsmanship of Greece to hit upon, but it has never shown itself susceptible of scientific definition. So it was never fully analysed and remained full of picturesque obscurities. Since then it has developed an abundance of tantalising ambiguities and become as elusive as 'validity' or 'law'. To justify its prerogative use, it hardly suffices to declare that "Plato and Aristotle have shown that in higher ideal realisation it is not necessary that the form itself should move in order to produce movement, that is, that the form should possess energy. The beloved may be indifferent to the lover. Beauty moves us by its perfection" (p. 378). Only, surely, if it does not disdain to reveal itself to us. And if it reveals itself in any way, if only by agitating ether waves, it *is* moving and acting on us in the scientific

sense. So that the 'unmoved mover' no longer has any scientific meaning.

But an even more fundamental question may be raised about Prof. Boodin's method. Our existing stock of ideas, including not only those with a recognised scientific status, but also those employed by common-sense, and the ideals, idols, and speculations of philosophy, has been accumulated by our past dealings with reality, and has resulted from our protracted efforts to come to terms with it. The most, therefore, that can be claimed for our ideas is that they should be adequate, *collectively*, to the manipulation of the world for human purposes. But it does not follow from this contention either that any particular selection from them should be adequate, or that, having been evolved for different and only distantly related purposes, they should all be concordant and consistent with each other. Accordingly, we find that different methods suit different subjects (*e.g.* mechanism and teleology), that conceptions used in different subjects are incompatible with each other, and that conceptions may continue in use which are inherently self-contradictory, *e.g.* that of an omnipotent and yet benevolent deity. For if a conception is a psychological conflation of emotional demands and vital attitudes, this is quite natural: its 'self-contradiction' will then merely embody the conflict in the soul that generated it. Such discrepancies, however, are not a serious scientific inconvenience: for the sciences do not claim finality for their conceptions, and can continue to cherish the hope that they will hereafter grow harmonious, while in the meantime the use of one conception for one purpose does not exclude the use of another for another. Metaphysical systems, however, in so far as they aim at consistency, must make selections, and selections imply alternatives, and alternatives a reference to desirability and comparison of values. Does it not follow that no metaphysic that has relation to any empirical material can lay claim to cogency or finality?

It has, however, like every scientific conception, a duty laid upon it which it cannot disclaim. It is bound to make quite clear and unmistakable the meaning it attaches to the terms it operates with. And it will usually be found that metaphysicians leave some of their essential terms in impenetrable obscurity. In Prof. Boodin's case this obscurity would appear to surround especially his notion of 'validity'. In particular its relation to 'value' is not explained, though page 188 makes a convenient distinction between 'value' (subjective), and 'worth' (objective). According to page 137, value is 'made possible' by 'consciousness,' which here does not seem quite so 'neutral,' as it is officially supposed to be. But how is 'value' related to 'validity'? 'Validity' would seem to be objective; yet on page 340 it has degrees, like 'value'. And on pages 339-41 we are treated to the old Platonic contention against Protagoras, dog-faced baboon and all. There must be an absolute standard, absolutely 'valid'; for otherwise the possibility of 'validity' is denied, "all argument must stop," and "one opinion is no truer than another". If no notice is taken of the Protagorean reply which, as I have shown in my *Plato or Protagoras?* is given and *not* refuted in the *Theaetetus*, the logical conclusion is that "radical empiricism is impossible as our ultimate philosophy," because with it "no ideal could be valid". Thus 'validity' becomes vital to Prof. Boodin's scheme, and the *deus ex machina* which assures it is 'form'; but I can find no reason why 'forms' should pre-exist, and not be formed, and transformed, in the process of the real, or why 'validity' should not arise in the course of experience out of agreements about values.

A similar obscurity besets Prof. Boodin's "valid rules of thought," and the dictum that "metaphysics implies logic" (p. xv). Aye, but what sort

of logic? The traditional Formalism, which sacrifices all meaning to a 'validity' it utterly fails to realise? Or a more reasonable sort, which prefers the real values of 'material' truth to unsatisfied craving for 'formal validity,' and is content to conceive its 'laws' as the postulates of intersubjective intercourse which can be *hypothetically* applied to the world of things and used successfully to calculate the behaviour of *some* of them for some purposes? I cannot but feel that there are dark corners in Prof. Boodin's 'realistic universe' which have never been illumined by the sunlight of a thoroughgoing pragmatism.

F. C. S. SCHILLER.

*Religion and Philosophy.* By R. G. COLLINGWOOD, Fellow and Lecturer of Pembroke College, Oxford. London: Macmillan & Co., 1916. Pp. xviii, 219.

"This book is the result of an attempt to treat the Christian creed not as dogma but as a critical solution of a philosophical problem," so writes Mr. Collingwood in his Introduction. For him, as for an old Apologist, Christianity is simply true philosophy. His work falls into three parts: (i.) "The General Nature of Religion"; (ii.) "Religion and Metaphysics"; (iii.) "From Metaphysics to Theology". In developing his own views Mr. Collingwood's method may be best described as dialectical. He advances to the solution of the problem on hand by a discussion and criticism of faulty or inadequate theories on the subject, and so strives to reach a truer and more complete conception. He conducts his argument with perfect urbanity. Controversy in his hands never assumes a personal tone, and he is more concerned with ways of thinking than the manner in which they are represented by particular thinkers.

As the present writer finds himself at variance at many points with the author, he should perhaps say at the outset, that the book is able and thoughtful, marked by great lucidity and precision of style as well as by considerable independence of mind. And though the volume is not a large one, it is a careful, deliberate, and considered contribution to the subject.

According to Mr. Collingwood the centre and foundation of religion is creed, and every religious creed is a view of the universe. Religion is no doubt conduct too, but conduct implies knowledge: religion is also feeling or emotion, but feeling is meaningless apart from intellectual activity. Religion, therefore, in its intellectual aspect is theology, and theology is not an external superstructure built upon religion.

Here the writer exaggerates the intellectual side of religion, and seriously underrates the importance of feeling. It is true, however, that theology is not an excrescence on religion, for every religion that reaches a certain stage of development must articulate itself in doctrines. Yet theology is not the religious experience but its reflective interpretation. One consequence of Mr. Collingwood's translation of religion into a theory of God and His relations to the universe is, that he recognises no difference between the philosophy of religion and philosophy in general. To this one would reply that the religious experience is something specific, and it is desirable to distinguish a philosophy of religion, which gives a speculative interpretation of that experience, from philosophy which deals with experience as a whole. For Mr. Collingwood the distinction is superfluous, since he denies there is anything specific in the religious experience: religion is simply a thinking and an active life in one, and "whatever is life at all for that very reason is religious in its degree". On this theory it is not evident why the religious and the secular should ever have been differentiated.



In his chapter on "Religion and History," Mr. Collingwood's aim is limited; and he is mainly concerned to show that history should not be overrated, and that a historic positivism cannot solve the problems of religion.

In his second part, Mr. Collingwood discusses the Proofs of God, Matter, Personality, and Evil. In regard to the traditional Proofs he pertinently remarks: "Before proving God, it might be profitable to ask what is meant by God". One feels, for instance, that the Ontological Proof, so far as it has a shadow of validity, is useless in a religious interest. The two following chapters are important, for the writer develops in them those ideas of the relation of God to the world and man in the light of which he interprets religion. I must confine myself to one or two essential points. With the criticism of materialism, that it is right in affirming a reality beyond the power of the individual mind to alter, but wrong in describing the objective world as something aloof and apart from mind in general, few will find fault. In the chapter on Personality Mr. Collingwood puts forward certain ideas which have an important bearing on his speculative conclusions, ideas from which many will dissent. If two minds, he holds, think the same thing and will the same thing, the distinction between them has given place to an identity: difference is overcome. He further argues that the self of a thing cannot be distinguished from its relations. In the human mind we are invited to see a type of the self-identity of God, and in the identification of two human minds a type of the identity of God's mind and man's mind. The argument, if not quite novel, is far from convincing. To say that the self of a thing is indistinguishable from its relations leaves it totally inexplicable how these specific relations are sustained. And to affirm that two minds, in so far as they think the same thing, become identical is to ignore the fact that the two thoughts are not precisely identical, and that each mind maintains itself as a separate centre of interest and value. If we do justice to the unique self-feeling, we cannot suppose that one consciousness can fuse with another in this way. From this theory, however, the writer deduces his theory of God as up to a point identical with the totality of human spirits, yet only identical in the fullest degree when these minds know the truth and will the good. In other words God is transcendent only in the sense that He is already all that man can attain.

How is this theory compatible with the existence of evil in the universe? Mr. Collingwood does not take refuge in a supra-moral Absolute. Nor does he suppose that evil is merely a means to good, for this, as he says, does not make the bad will of the agent good. In seeking to solve the question he finds a parallel in the problem of error. Mr. Collingwood accepts the principle that all thought is thought of reality, and on this presupposition it is hard to see how any real explanation of error is possible. His view amounts to this. Error exists, but it exists in a partially unified world. In the degree that all things are related to one another in a totality or system, error is expelled by truth. And in so far as the world becomes a totality or moral cosmos, the evil elements in it are expelled by the good. In the process of attaining this totality God is being realised; and we have the paradoxical conclusion that God does not permit evil but overcomes it. The writer, we note in passing, has nothing to say on the difficult question of the distribution of evil. It is true that evil exists only in an environment of good, and is a challenge to the good to overcome it. But if evil is not a means to the good, as we are told it is not, one cannot see why, on Mr. Collingwood's principles, it should be there at all. For moral evil is essentially that which ought not to be. On the other hand, if moral evil is accepted as a fact, no one will

deny that the development of a moral universe implies its progressive elimination. But this does not cast light on the problem of its existence.

When he turns to theology, Mr. Collingwood tells us he does not aim at orthodoxy—which is evident—but only at translating his philosophical results into theological terms. In this part he takes up the ideas of Incarnation, Redemption, and Miracle. If we bear in mind the conceptions of God and personality already touched upon, we shall find the theology of the book is an application of these principles.

I should like to say in closing, that Mr. Collingwood's method of bringing speculative principles from without and applying them to Christianity is unsatisfactory and apt to mislead. It would be fairer if he developed his own theology in independence of the forms and language of Christian theology.

G. GALLOWAY.

*The Good Man and the Good. An Introduction to Ethics.* By MARY WHITON CALKINS. New York: The Macmillan Company, 1918.

A book from the pen of Prof. Calkins may be said by this time to carry something of its own introduction with it. It is sure to exhibit the marks of a highly skilful teacher, bent on tracing a clear path for us through all the intricacies of a philosophical subject with a firm and practised hand, and leaving us with something of a possession at the end. It may not exactly be fitted to compass the salvation of the whole soul. That would require a capacity of combining interest and inevitableness (both at their highest intensity) in the same argument, a power of giving convincing quality to a wondrous tale, a power of making sober truth of an arresting story, of proclaiming a veritable new evangel with such an air of simple cogency that it seems just plain truth, and "the only possible way things can be". That kind of power is probably reserved for the masters in philosophy; and they are not many in a century. But Prof. Calkins is one of the writers of whom we may be sure at least that their story will be given an interest, if it be not an evangel; and if it do not represent the way things *must* be, it will at least give the reader the impression of having represented one way they could be. In other words, the game of thinking will be played. Her findings will be presented as though they were really expected to have a claim on our intellectual assent; and whatever we may think of their truth, their being true or otherwise will be at least a point which seems to matter. The consequence is that the ultimate result, whether welcome or otherwise, will remain to the inquiring mind a thing of solid value.

The book before us appears to have pretty well sustained this character. The aim of being at once concrete and systematic is written all over it; it shows plain traces of the attempt, on the one hand, to deal, in a book on ethics, with ideas which are relevant to the moral problems of actual life; and on the other hand, to exhibit some unity of principle in the treatment.

The matter of the book carries out precisely what the title promises. There are two directions in which we may seem to find the solution of the problem of the moral life. We may find it in the man who fulfils his sense of obligation; or in the man who wills what is really good. These two, the good man and the good, while they are made especially the themes of the first two chapters, are generally the subject of the whole treatise. The whole falls naturally into two halves, five chapters dealing with the good and five with the good man in his various concrete forms. A concluding chapter discriminates the field of ethics from the adjacent fields of æsthetics and religion. This is followed by some pages of notes,

an index and a register of names, forming altogether a useful compact well-arranged little volume of some 200 odd pages. It ought to fill a useful place as an introduction to the study of ethics.

The chief contention of the book appears to lie in the view that the good must be all-inclusive, both "numerically" and "qualitatively". Numerically considered, the good is "neither myself nor any one 'other self,' nor any restricted group of others, but the all-inclusive, vitally related, society of selves" (p. 67). Qualitatively, the good is not to be described in terms of "any one kind of consciousness, as pity, loyalty, wisdom or happiness". It is to be "inclusive of all these experiences and of all others which people wish or will for themselves". A difficulty in the argument seems to us to lie in the fact that no reason appears to be offered *why* the good should be all-inclusive. This would not be so pressing a matter, were it not also said that there is no reaching the person who is convincingly of another mind. It is insisted that the person who "honestly, intelligently, and fixedly," holds a contrary idea of the supreme good to ours, "rightly gains exemption from the requirement to explain his position". The difficulty seems to us to spring from the use made of the Aristotelian doctrine that the true good is that object or end of will for the sake of which all other things are willed. It is quite true that an end which is thus self-sufficient is self-explanatory. But insuperable difficulties are unavoidable if we assume, as the author appears to do, that an end is self-sufficient because someone happens to take it to be so.

The second half of the work is devoted, in the author's words, to the deepening and enlargement of the view of the good thus attained. This involves the study of the various concrete shapes of the virtuous life; the study which, in the author's view, chiefly saves ethics from inutility. Virtues are instinctive tendencies controlled; controlled through the instrumentality of habits. On the basis of a certain grouping of instinctive tendencies, a grouping made for the purposes of ethics, which regards them as divisible into two—(a) those either individual or social and (b) those inevitably social—a study is made of the corresponding virtues which these tendencies, when controlled, become; virtues (a) either individual or social (chap. VII.), and (b) essentially social (chap. VIII.-X.). Throughout the treatment, the good towards which the instincts are to be guided by the controlling habit remains the same—"the full and complete experience of the universal community of selves".

We should not wonder if these chapters, with their pervading Aristotelianism, enriched and fructified by modern instinct-psychology, should prove to many the most interesting chapters of the book. Some will find it bracing, *e.g.* to be told for once, in an ethical textbook, that explicit lying is always wrong; and many will agree profoundly with the author's contention about justice, that in practice it demands not general knowledge, but individual knowledge, and will sympathise much with Prof. James's crab, which will not have it that it is a crustacean, "I am no such thing, I am MYSELF, MYSELF".

The concluding thoughts on the fixing of the landmarks around the ethical field are probably rightly placed at the end of the discussion. But the emphasis laid on personality there, brings us back to what we cannot but regard as the pervading imperfection of an otherwise strenuous and helpful and excellently "documented" little book. The moral attitude is differentiated from the aesthetic in that its object is personal; and from religion in that its object, though personal, as that of the latter also is, remains strictly human, while religion characteristically deals with a being or beings whose personality is more than human. Now it seems to us that there is an assumption running throughout the book that the good cannot be properly personal unless it leaves each person in undisturbed

possession of his own supreme "personal" convictions. But surely you may modify these and still leave the individual a person. The only way in which a modification of his opinions would be an invasion of his personality, would be if you refused to take him on his own ground. To take him on his own ground, however, is exactly what the author will not allow us to do. She always assumes that a person's supreme good may not be all-inclusive and may yet be self-justifying. In other words, she assumes the possibility of an ultimate plurality of goods. If so, ethical argument seems to have no standing-ground, and nothing seems to be left but to insist arbitrarily that *besides* being self-justifying a man's good shall also be all-inclusive; which arbitrariness of procedure is the only invasion of his personality which there seems to be any reason to fear or any call to avoid.

J. W. SCOTT.

*The Next Step in Religion: an Essay towards the Coming Renaissance.*  
By ROY WOOD SELLARS, Ph.D. New York: The Macmillan Co.,  
1918. Pp. 228.

The American author of this volume is profoundly dissatisfied with current religion and Christian theology: he seeks to show the far-reaching reform, or rather revolution, which religion must undergo, if it is to become a vital element in social life. The book is clearly and vigorously written; moreover, Dr Sellars is well-informed, and very confident in his own principles and results. His work, with its clear-cut and uncompromising conclusions, may influence those who are out of sympathy with dogmatic theology, and especially when they do not realise the magnitude and difficulty of the problems at issue. Some of the criticisms of the book are no doubt justified: but the argument savours much of *parti pris*, and as the author covers a wide field in little more than two hundred pages, his discussions are rapid and slight. Thus the work contains sections on Primitive Religion, Magic and Ritual, Cosmogonies, Christian Origins, Catholicism, and Protestantism, as well as chapters on the Problem of Evil, and on Immortality. It concludes with a sketch of the kind of Humanistic Religion which commends itself to the author.

It is impossible within the limits of a brief notice to enter into detailed criticisms, but two general remarks may be made. Dr. Sellars in his method resembles the Deists; by systematically purging current religion of false accretions and superstitions, he tries to reach a valid residuum. In the process God, immortality, and worship vanish, and only devotion to social good and mundane spiritual ideals remains. The essence of religion is not to be reached in this way. Moreover, the writer tends to confuse throughout the question of historic origin with that of validity, and to suggest that the myths and superstitions interwoven with primitive religion somehow prejudice its higher development. Thus theological doctrines are rejected because, on the one hand, they grew historically out of a primitive and animistic view of the world, and, on the other, because they are not justified by what Dr. Sellars calls the modern scientific consciousness.

The second remark is, that Dr. Sellars does not always draw the conclusions from his own naturalistic premises. Why, for instance, should he talk of the need of devotion to spiritual ideals, when from his own standpoint he should only speak of pleasure-values? Again, what ground has he for his optimism about the future of the race and its progress under his new religion? For he will hear of no providential order which embraces the natural and the spiritual worlds, and secures the subordination of the former to the latter.

G. G.

*The New State : Group Organisation the Solution of Popular Government.*  
By M. P. FOLLETT. Longmans, 1918. Pp. vii, 373. 12s. 6d.

This seems to me a very excellent book. Its subject is in a sense an old one, the "state" considered as a "collective" will. But the treatment, which claims to be new, is, I think, at least in detail and exposition, an advance on any other with which I am acquainted. Its characteristic points, as I understand them, are : 1. A total repudiation of the crowd or herd theory of society, and, with it, of "ballot-box democracy," and its replacement by the group theory (typified by the working of a first-rate committee). 2. The search for the individual and his will as something created by the integration of differences and realised only in his inter-relations. 3. The contribution to this end of the practice of "the art of living together" in the daily contact of groups, of which the neighbourhood group and the occupational group are carefully studied, the former especially being treated in much detail drawn from recent American experience.

The position of the occupational group involves a discussion of recent forms of pluralism, to which the authoress assigns, as I read her, the leading value among present-day movements, while insisting that the force or spirit of wholeness, which is the mainspring of all group-formation, cannot stop short of forming a state (necessarily federal) to begin with, and then a world-state. The "state," it is urged throughout, is *unifying not unified*. It is the inherent principle and attendant consequence of the "art of living together," and sovereignty is not a relation of some to others, but what every "whole" is essentially in its recognition of itself and for itself. Citizenship, therefore, is not an acceptance of an existent fact, but a continual creation of a living expression. The emphasis of the book is on the "new" democracy as involving a "new" psychology which will be instrumental to the practice and experience of the (almost "new") art of living together, and drawing the fullest profit from each others' differences by integration, *not* spreading similarities by imitation.

Of course, much appears open to criticism, but the substantive contention seems to me both true and fertile, and the book is very well written.

BERNARD BOSANQUET.

*Man's Supreme Inheritance, Conscious Guidance and Control in Relation to Human Evolution in Civilisation.* By F. MATTHIAS ALEXANDER.

With an Introductory Word by Prof. John Dewey and Appreciations received from Prof. Frank Granger, Rev. J. H. Jowett, Prof. H. M. Kallen and Prof. John Dewey. Methuen & Co., London, second edition, revised, November, 1918. Pp. xxviii, 239.

At first sight this book appears to be merely a piece of propaganda on behalf of the author's scheme of 'breathing exercises' and the like, and a warning against the inferior methods practised by the Yogis and others ; but it is not easy on this theory to account for the distinguished list of sponsors who commend it in somewhat extravagant terms. When John Dewey is found to say (p. xxii) that the author "is the only person I have ever known, or known of, who knows what he is talking about in the sense a competent engineer knows when he is talking about his specialty," one inclines to think there must be something wonderful in the book. It has, however, eluded the writer of this notice, and perhaps the solution of the mystery is that some of the pragmatists have felt the need of equipping their doctrine with a practical corollary which should be related to it somewhat as 'Christian Science' is to Idealism, and should satisfy the human craving for 'faith-cures' by a pragmatic and functional equivalent.

Received also :—

- C. T. Lewis, *A Survey of Symbolic Logic*, University of California Press, pp. vi, 406.
- J. Watson, *The State in Peace and War*, Maclehose & Sons, pp. xii, 296.
- Sir Henry Jones, *The Principles of Citizenship*, Macmillan, pp. viii, 180.
- K. K. Kawakami, *Japan in World Politics*, Macmillan, pp. xxvii, 300.
- Giovanni Marchesini, *Lo Spirito evangelico di Roberto Ardigo*, Zanichelli, pp. 122.
- Ludwig Stein (trans. by Shishirkumar Maitra, M.A.), *Philosophical Currents of the Present Day*, vol. ii., pp. iii, 158, University of Calcutta.
- Henry Sidgwick (with preface by Rt. Hon. Viscount Bryce), *National and International Right and Wrong*, Two Essays, pp. 77, George Allen & Unwin.
- T. F. Walshe, *The Principles of Christian Apologetics*, pp. xv, 252, Longmans, Green & Co.
- Frank Watts, *Echo Personalities*, pp. 111, George Allen & Unwin.
- G. Pitt Rivers, *Conscience and Fanaticism*, pp. xiii, 112, Heinemann.
- P. Decoster, *La Réforme de la Conscience*, pp. 91, M. Lamertin, Bruxelles.
- P. E. B. Jourdain, *The Philosophy of Mr. B<sub>2</sub>rtr<sub>2</sub>d and R<sub>2</sub>ss<sub>2</sub>ll*, pp. 96, Allen & Unwin.
- F. Densmore, *Teton Sioux Music*, Bureau of American Ethnology, Bulletin 61, pp. xxviii, 561, Govt. Printing Office, Washington.
- Albert Kaploun, *Psychologie générale, tirée de l'étude du rêve*, pp. 205, Librairie Payot et Cie, Lausanne.
- F. C. Sharp, *Education for Character*, Indianapolis, Bobbs, Merrill & Co., pp. 483.
- F. B. Shaw, *Lectures on the Philosophy of Mathematics*, pp. vii, 206, Open Court Co.
- F. W. Scott, *Syndicalism and Philosophical Realism*, pp. 215, A. & C. Black.
- R. B. Perry, *The Present Conflict of Ideals*, Longmans, Green & Co., pp. xiii, 549.
- Will Durant, *Philosophy and the Social Problem*, pp. x, 272, The Macmillan Co., New York.
- Catalogue of Lewis's Medical and Scientific Circulating Library*, New Edition, revised to end of 1917, London, H. K. Lewis & Co., 1918, pp. 491.
- C. C. F. Webb, *God and Personality*, George Allen & Unwin, pp. 281.
- R. S. Carroll, *The Mastery of Nervousness*, New York, Macmillan & Co., 3rd edition, 1918, pp. 348.
- E. H. Hirst, *Self and Neighbour*, Macmillan, pp. ix, 291.
- H. E. Sampson, *Theou Sophin*, Kegan Paul & Co., pp. 362.
- R. Rusk, *Experimental Education*, Longmans, Green & Co., pp. viii, 346.

## VIII.—PHILOSOPHICAL PERIODICALS.

**PHILOSOPHICAL REVIEW.** Vol. xxvii., No. 5. **A. Lalande.** 'Philosophy in France, 1917.' [Reviews works centering about the notion of right (Anthony, Grasset, Davy, Lévy-Ullmann), the league of nations (Leroy, Milhaud, Buisson), German philosophy (Papillaut, Sartiaux), and psychology (Dugas, Joteyko, Bernheim, etc.). Appreciation of Le Dantec and Durkheim.] **H. N. Gardiner.** 'The Psychology of the Affections in Plato and Aristotle: I. Plato.' [Outlines the pre-Platonic and the Platonic doctrines. Plato's theory was developed in relation to the ethical controversies of his time, and was conditioned by current conceptions as well as by his whole ethical and metaphysical philosophy. He is more thorough than his predecessors, but his analyses and inductions are imperfect and his conclusions inconsistent.] **G. Cator.** 'Theism as an Intellectual Polity.' [Maintains that, if we draw a characteristic curve of the path of human intelligence, then the ordinate of this curve giving the highest noetic value or the greatest amount of wisdom is that erected on the abscissal point marked 'theism'.] **R. W. Sellars.** 'On the Nature of our Knowledge of the Physical World.' [Knowledge is not apprehension of the physical existent, but the interpretation of that existent in terms of propositions based on the (mental, subjective, personal) material which corresponds with the existent.] Discussion. **R. F. A. Hoernlé.** 'Notes on Professor J. S. Mackenzie's Theory of Belief, Judgment, and Knowledge.' [The distinction of truth and correctness; the problem of doubt; the notion of objective orders; the antithesis of belief and knowledge.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxvii., No. 6. **L. J. Henderson.** 'Mechanism from the Standpoint of Physical Science.' [Critique of Driesch and Haldane. Organisation is not fatal to mechanism, which the writer therefore provisionally accepts.] **H. S. Jennings.** 'Mechanism and Vitalism.' [Argues that the principle of experimental determinism, characteristic of inorganic science, is adequate to the phenomena of life, even if consciousness is more than epiphenomenon, and even if we take a biocentric view of the universe.] **H. C. Warren.** 'Mechanism *versus* Vitalism in the Domain of Psychology.' [The case against mechanism rests negatively on inconceivability, and positively on the facts of organisation, voluntary selection, and teleology. The two latter facts are of a psychological order. As regards volition, we cannot demonstrate the falsity of animism, but we can say that the evidence is consistent with determination by physico-chemical antecedents. Nor is there anything in teleology (distant reception, memory, anticipation) that cannot be brought within the mechanistic programme.] **W. T. Marvin.** 'Mechanism *versus* Vitalism as a Philosophical Issue.' [Philosophy cannot decide which hypothesis is 'true'; it can, however, trace consequences. Civilisation, enlightenment, man's mastery of his destiny, all depend upon a mechanistic philosophy. Vitalism, however, is valuable as an empirical check on mechanistic rationalism, as a protest against over-simplification, and as a reminder of the factual presence of the



teleological.] **R. F. A. Hoernlé.** 'Mechanism and Vitalism.' [Vitalism is to be rejected on its merits; but so is the whole disjunction of mechanism and vitalism, for which we must substitute the conjunction 'mechanism and teleology'. Teleological terms are needed, not as substitutes for physico-chemical, but as fixing the 'dominant' character of life-processes, to which their physico-chemical aspect is subsidiary. This position squares with that of Jennings, but insists on the distinctive nature of biological structures and processes.] Discussion. **F. Thilly.** 'The Kantian Ethics and its Critics.' [Defence of Kant against F. Adler's *Ethical Philosophy of Life*.] Reviews of Books. Notices of New Books. Notes.

PSYCHOLOGICAL REVIEW. Vol. xxv., No. 4. **H. B. Reed.** 'Associative Aids : II. Their Relation to Practice and the Transfer of Training.' [Associative aids disappear with practice, and condition rate of improvement. They facilitate the formation of new responses but delay those that have become mechanised. Transfer of training must be explained by common associative bonds: Thorndike's theory of identical elements thus receives a specific meaning. The law of contiguity presupposes active attention.] **R. Pintner.** 'Intelligence as Estimated from Photographs.' [Photographs of 12 children, ranging by test from supernormal to feeble-minded, were ranked for intelligence by physicians, psychologists, students, teachers, and a miscellaneous group. In gross result, chance coefficients are about as good as those of the judges. The value of objective test is thus indicated.] **C. Rosenow.** 'The Genesis of the Image.' [The child prattles continuously, with attention on the activity. If the activity is inhibited, as by direct command of authority, the conditions are ripe for the genesis of free imagery.] **L. T. Troland.** 'The Heterochromatic Differential Threshold for Brightness : I. Experimental.' [Determinations of the relative heterochromatic limen of brightness for two observers, with 4 standard and 13 variable colours, at an intensity of 25 photons, with the necessary supplementary observations. In general, the limen tends to increase in passing from the standard to the neighbourhood of its complementary, beyond which it begins to decrease.] **P. Reeves.** 'Rate of Pupillary Dilation and Contraction.' [Shows the effect on pupillary diameter of the closure of one eye; pupillary diameters at fixed brightnesses; and the rates of opening and closing the pupil. Under the conditions of experiment, the time for opening averages 5 minutes, and that for closing 5 seconds.]

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. xv., 17. **B. H. Bode.** 'Consciousness as Behaviour.' [In reply to Marshall in xv., 10, demurs to a consciousness which is irreducible to a form of behaviour and content with James's illustration of the 'automatic sweet-heart'.] **H. B. Smith.** 'Non-Aristotelian Logic.' [Logical postulates may be varied like geometrical and yet the various consequences may all "be applicable to one and the self-same world" which "is plastic enough to illustrate two hypotheses indifferently". As may be shown—by symbols.] **R. F. A. Hoernlé.** American Philosophical Association : Reports of the preliminary Meetings of the Leaders of the Discussion for 1918, on Mechanism and Vitalism.—xv., 18. **H. B. Alexander.** 'Metaphysics as a Fine Art.' [It yields the pleasure of being an 'initiate,' but is not to be caged in 'schools' and '-isms' which "pervert a noble art into a mimic science". Being essentially personal, it "never will be complete while men live and discover that they live".] **M. T. McClure.** 'Pragmatism and Democracy.' ["Absolutism is the philosophy of autocracy," derived from mathematics, and affiliated to the belief in the reality of universals.

"The sovereignty of the universal and the passive submission of the particular were the pattern for feudalism," and even in science "the Reign of Law became as inexorable as the fixity of a universal or as the supremacy of the Pope". Pragmatism takes its cue from biology, and its leading ideas are "flexibility, adaptation, and compromise," with "the creative power of intelligence," which differentiates adjustment from mechanism and saves personality.] **W. R. Wells.** 'On Religious Values: A Rejoinder.' [To E. S. Brightman and J. S. Moore in xv., 3. Interesting as a 'behaviourist' treatment of value, and for its explicit assertion about beliefs that "nothing can be inferred from their survival-value as to their truth"]—xv., 19. **F. C. S. Schiller.** 'Truth and Survival-Value.' [Apropos of W. R. Wells's assumption in xiv., 24, that to argue from the value to the truth of a belief is utterly false, and indeed 'the Pragmatic Fallacy,' it is urged that pragmatism has merely drawn attention to a common human practice which deserves careful examination. Admittedly at first sight there is no connexion visible between value and truth: it begins to appear only when it is recognised that every truth has to come into being, to seem desirable, and more valuable than any alternative. Hence truth seems to be simply the term for the sort of value which is cognitive or logical. Next a question arises as to the validity of a value claimed, and it is seen that in disputes about values the logician must avoid the fallacies of 'confounding the persons' and of 'ex post facto wisdom'. If these are avoided, no genuine cases of beliefs valuable, but not true, appear to remain. However, it has next to be noticed that if truths are a species of value they must be interchangeable with other species, and their rate of exchange and value of equivalents may be inquired into. And it becomes conceivable that a doctrine may be so lacking in other sorts of value that its claim to truth-value is never admitted. Three such cases of "beliefs whose truth-claim is rejected for non-cognitive reasons" are considered, (1) the belief that life is a dream, (2) solipsism, and (3) pessimism. Hence it seems untrue that "survival-values cannot determine truth-value". "It is even possible that ultimately and indirectly all truth-values are affected by the survival-value test."] **D. F. Swenson.** 'Sixteen Logical Aphorisms.' [Too long as aphorisms, too short as discussions.] **E. L. Schaub.** Eighteenth Annual Meeting of the Western Philosophical Association.—Vol. xv., No. 20. **G. A. de Laguna.** 'The Empirical Correlation of Mental and Bodily Phenomena.' [Is to be understood only by recognising that "the central nervous system is not primarily a physiological organ. Its function is only secondarily to maintain the inner equilibrium of bodily processes . . . its primary function is the adjustment of the behaviour of the individual as a whole to the outer world of goods and dangers which constitutes his environment. It is in the performance of this wider function that we must find the correlate of feeling and thought rather than in the stimulation of neurone and ganglion."] **R. C. Lodge.** 'The Division of Judgments.' [A formal classification of propositions "according as the perceptual or the intellectual element predominates."] Bibliography for Discussion on Mechanism *versus* Vitalism held at the American Philosophical Association.—Vol. xv., No. 21. [Lost in transmission.] **A. A. Goldenweiser.** 'History, Psychology, and Culture: A Set of Categories for an Introduction to Social Science. Part I.' **H. Goddard.** 'Politics, Philosophy and Poetry.' Further Bibliography of the Writings of **C. S. Peirce.**—Vol. xv., No. 22. **A. A. Goldenweiser.** 'History, Psychology, and Culture, Part II.' [Discusses how far historical events must be regarded as determined by 'laws' or are radically recalcitrant to such explanation, and concludes that "the deterministic and the accidental . . . are intimately interrelated, being in fact both complementary

and restrictive." "The driving power, the 'yeast' of history is supplied by various accidental factors in origin, individual . . . or at any rate external to a given system." "Thus the accidental appears as predominant . . . when it comes to the particular *when, where, how, and even what*, of events." However, the accidental also "is restricted by the deterministic factors. Certain things coming from without a system, or even originating from within will not 'take'." **A. A. Merrill.** 'Free Will and Intuition.' ["You can predict nothing concerning consciousness and that is all that is meant by free will."]—Vol. xv., No. 23.

**G. A. de Laguna.** 'Dualism in Animal Psychology.' [Discusses apropos of the second edition of M. F. Washburns, *The Animal Mind* the comparative merits of 'behaviourist' and 'dualist' interpretations, holding that the latter "step outside the bounds of scientifically verifiable hypothesis and enter upon purely metaphysical speculation in the bad sense of the term." Nevertheless, the 'mechanistic behaviourism' of Bethe and Loeb is not approved of either, and 'introspection' need not be 'scrapped.' It is only empirical observation.] **H. R. Marshall.** 'Other Men's Minds.' ["The attribution of a consciousness characteristic to other men, connected with their behaviour, is not due to any knowledge that transcends experience, but is due to a quite natural interpretation of that part of that experience which relates to the behaviour of others."] **H. P. Weiss.** 'Conscious Behaviour.' [A defence of 'behaviourism' which regards 'phenomena' as singular, and explains that "some psychologists prefer to substitute natural science concepts in which the principles of evolution, phylogeny, and ontogeny are explicitly regarded as underlying their investigations."]—Vol. xv., No. 24.

**T. R. Powell.** 'The Logic and Rhetoric of Constitutional Law.' [An interesting study of the ways in which judicial decisions render it flexible.] **H. Goddard.** 'The Coming Bravery—A Spencerian Dream.' [On the passing of individualism.]—Vol. xv., No. 25.

**M. R. Cohen.** 'The Subject Matter of Formal Logic.' [The "science designed to train young people in the habits of clear thinking," "is neither clearly distinguished from psychology nor frankly treated as a branch" thereof. "In addition it has interjected into it the following miscellany . . . (1) Linguistic information as to the meaning and use of words . . . ; (2) rhetorical considerations as to the persuasive force of various arguments; (3) metaphysical considerations as to the reality or unreality of universals and particulars and their relations; (4) epistemologic, *i.e.*, mixed psychological and metaphysical, considerations as to the nature of knowledge and its relation to what is called the world of reality; (5) catalogues of miscellaneous ancient errors, under the head of material fallacies; (6) pedagogic directions as to the conduct of the human understanding, teaching us how to discover the cause of typhoid or of some other disease of which the cause is already known; (7) miscellaneous general considerations of various other sciences and their histories, which pretend to describe the essence of scientific methods; and (8) the rudiments of formal or symbolic logic." A paper well worth reading which finally plumps for the identification of logic and mathematics.] **J. B. Pratt.** 'Professor Spaulding's Non-Existent Illusions.' [Reviews his *New Rationalism*, and criticises its accounts of error and illusion. *viz.* (1) that "illusions have a perfectly good causal explanation; (2) that they consist in taking one entity to be another which it is not, or in localising it in the wrong place or the wrong time; (3) that they are not existents, but were subsistents." The first is shown to be irrelevant, the second to involve the reality of error as a subjective fact, which is incompatible with 'pan-Objectivism,' and the third to be untenable.]—Vol. xv., No. 26.

**B. H. Bode.** 'Mr. Russell and Philosophical Method.' [Reviews *Mysticism and Logic*, and concludes that

"in the end the attempt to reduce all knowledge to the type of acquaintance breaks down and leaves the world of Ideas and the world of temporal existence in much the same mutual isolation as in the philosophy of Plato," while a philosophic 'emancipation' that "bids us turn our backs on the affairs of this world and seek the fulfilment of our aspirations in the contemplation of an  $n$ -dimensional world, created from false premises and by a dubious logic" is "not a deliverance but an opiate".]—Vol. xvi., No. 1. **B. Russell.** 'Professor Dewey's *Essays on Experimental Logic*.' [Declares that "in reading this collection of essays I have been conscious of a much greater measure of agreement than the author would consider justifiable on my part," and that often in Dewey's criticisms of himself the only thing he disagreed with was that the criticism applied to him. Proceeds to explain 'Logical and Psychological Data,' distinguishing "three problems—one of pure psychology, one of mixed psychology and logic, and one of pure logic". Then discusses Dewey's instrumentalism which is complimented as "a pragmatism which is not intended to be used for the support of ancient superstitions," and will not "dogmatically deny its truth," but criticises its omission to deal with Hume and scepticism. Incidentally analyses his own bias, and explains why he likes behaviourism and neutral monism, and is repelled by a pragmatism which is "connected with theological superstition and with the habit of accepting beliefs because they are pleasant," censures "the instinct of contemplation and of escape from one's own personality," which is a valuable ideal functioning as a sort of religion, and allows us only to know a world which is "man-made like the scenery on the Underground". Finally, Russell discusses 'the Problem of the External World,' and concludes that "whatever accusations pragmatists may bring, I shall continue to protest it was not I who made the world". Altogether an important and brilliant article.]—xvi., 2. **A. G. A. Balz.** 'The Use and Misuse of History.' [A criticism of the current ways of writing the history of philosophy which points out that "histories of philosophy that shall organically relate systems to their generating conditions, and connect concepts with the massive and fecund life of groups, have not been written," that "a philosophy may be comparatively foreign to the contemporary social environment," and that "a society may outgrow a problem before philosophy has had time to find a solution".] **M. F. Washburn.** 'Animal Psychology.' [A reply to G. de Laguna in xv., 23.] **F. C. S. Schiller.** 'Doctrinal Functions.' [Comment on C. J. Keyser in xv., 10, which suggests that 'doctrinal functions' as defined may be traced everywhere, in religions, philosophies, and political creeds. Also that for many persons their beliefs are habitually 'doctrinal functions,' seeing that the "meaning and value they attach to them vary with their circumstances, moods, temper, and state of health". Also that, as Keyser admits that 'a propositional function is neither true nor false,' and it is always possible to select such constants as will generate, not a true proposition, but a nonsensical, the whole of *pure* mathematics must be composed of 'doctrinal functions,' and there cannot, strictly, be any mathematical *truth*. Every mathematical formula may be applied to cases where its values are either false or nonsensical. In general it follows that no rules are strictly universal and absolutely true; for all "get their real meaning from their application to cases".] **H. R. Marshall.** 'Of Outer-World Objects.' [Suggests that sight equips the new-born babe's experiences of 'otherness' with the quality of 'out-there-ness,' essential to the construction of an 'outer-world'.]—xvi., 3. **J. Guttmann.** 'Imagination as a Factor toward Truth.' [Raises after some pragmatist gloating over the downfall of Hegelism the question, "If we grant that the Absolute does not exist, what may we conclude of the

power of an absolutistic philosophy on man?" *I.e.*, granting that absolutes belong to "the Kingdom of the imagination," are they beneficial to man? The answer is that we may select the good ones and make 'reality' a term of ethical import.] **Q. L. Shepherd.** 'Pragmatism and the Irrelevant.' [A pragmatist repudiation of Miss Ackerman's attempt in xv., 13, to identify pragmatism with Hegelism. "Hegelism would have us go beyond knowledge to explain knowledge." But its "manner of going beyond" leaves all the difficulties where they were.] **C. A. Ellwood.** 'Comment on Dr. Goldenweiser's History, Psychology, and Culture.' [Cf. xv., 21, 22. Praises the articles as "a contribution of prime importance to the methodology of the social sciences".]—xvi., 4. **J. Guttmann.** 'Political Thought in Reconstruction.' [Demands a plan for reconstruction which can excite enthusiasm and intelligent foresight.] **V. R. Savic, W. T. Bush, H. Goddard, J. H. Tufts, H. B. Alexander, H. A. Overstreet.** 'An Opportunity.' [An appeal to America to help in the formation of the 'national philosophy' the Jugo Slavs 'need,' and American responses. The proposal at first sounds like satire, both on the extravagance of 'nationalism' in philosophy and on the parties concerned, but probably means that the Jugo Slavs are afraid of falling under the intellectual domination either of the Germans or of the Italians.] **A. P. Brogan.** 'The Fundamental Value Universal.' [Argues that "the relation 'better' is a sufficient fundamental universal for the theory of value . . . all value facts are facts about betterness," that "goodness and badness are not simple qualities," that ethical and æsthetical values involve betterness, and finally claims to have "gone over all of the general value terms carefully". But nothing is said either about logical or about pleasure values.]—xvi., 5. **A. Schinz.** 'New and Dominating Tendencies in French Philosophy since the Beginning of the War.' [Classified under heads of 'Papalism' and 'Economic Democratism'; but the stuff brought to the surface by the War in France does not appear to differ much from that produced elsewhere.] **I. Edman.** Eighteenth Annual Meeting of the American Philosophical Association.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. Mai-Juin, 1918. **M. de Wulf.** 'Civilisation et philosophie aux XII<sup>e</sup> et XIII<sup>e</sup> siècles.' [The middle ages to be judged by an absolute standard; mere comparison with our own times is futile. By the end of the XIIIth century a satisfactory synthesis had been made of the remains of classical tradition, the Christian religion, and the special peculiarities of the races who overthrew the Roman empire. Throughout the XIIIth century this synthesis was at its best and produced philosophical systems of permanent value. But, though outwardly stable, authoritative, and international, it contained the germs of modern differences of nation, philosophy, and social organisation.] **E. Guillaume.** 'La théorie de la relativité et le temps universel.' [An attempt to introduce into the equations of the theory of relativity a new variable which shall be neutral as between systems in relative motion and play the part of Newtonian time in the classical theory of mechanics.] **V. Delbos.** 'L'art et la philosophie.' [Philosophical attitudes towards the world can be expressed in poetry, as shown by Lucretius, Sully-Prudhomme, and Goethe; and in music, as shown by Wagner. Such efforts, fail, however, when they merely turn argument into verse. Great metaphysical systems in their architectonic character resemble great works of art.] **G. Marcel.** 'La métaphysique de Josiah Royce.' [A short sketch of R.'s life and works, followed by a long and very clear account of his philosophy. (To be continued.)] **R.H.** 'Réflexions sur la force du droit.' [Merely to set force and right in an abstract opposition is silly. The German partisans of force hold that their country's

power is due to its superior virtues and organisation, and that it has a duty to impose these on less advanced peoples. These views are rendered popular by the past history of the empire, are in accord with the predominant philosophy, and are bolstered up by various empirical arguments. Nevertheless they are mistaken and inconsistent; mere organisation and material productivity give no such exalted rights, and, if they did, the further argument from racial and linguistic affinities would have been needless. The believer in right will respect the personalities of nations, whether weak or strong. He will not necessarily guarantee them in their *de facto* possessions, unless they are using them for the general good of humanity.] Juillet-Août, 1918. **O. Hamelin.** 'Le Concept chez Aristote.' [The concept *par excellence* is a simple intellectual intuition of an intrinsically simple object. But this is an ideal, and A. generally means by it the definition of anything that has some kind of unity. In such concepts the genus plays the part of matter, and the difference that of form. Their whole content is universal, and they do not reach particular individuals.] **R. Mourgue.** 'Néovitalisme et sciences physiques.' [Mentions a number of facts which make against a cheap and easy mechanism in biology, but admits that they are not conclusive. Nevertheless it is wise to admit the possibility of processes in the organic world inexplicable by reference to inorganic processes. In this sense (and in this alone) is vitalism scientifically respectable.] **A. Leclère.** 'L'optimisme et la science.' [Science can guarantee no inevitable moral progress. The latest achievements of the human race are always the least stable, and we, none of us, act even up to the best thought of our time. Even if deliberate volition involve a fresh factor, yet it depends, to an indefinite extent, on lower conditions; it develops slowly in the individual, and does not last long in its full perfection. To correct all moral defects men's bodies would need to be remade, and medicine is never likely to reach this point. Nor would even this be enough, since external conditions would also have to be indefinitely far modified.] **G. Marcel.** 'La métaphysique de Josiah Royce' (*suite*). [R.'s attempt to solve the One and the Many by 'self-representative systems' is bold and honest, but finally untenable. He refuses to palter with the problem of evil and makes God himself suffer our pains and temptations and transform them into the experience of temptations overcome. But, although this conception as developed by him is subtle and profound enough to meet all superficial objections, it must be doubted whether he has really reconciled the freedom that is wanted for moral purposes with the unity which his metaphysics demands. R.'s theory that God's consciousness contains, in a single specious present, what for us involves past and future, is more compatible with the Bradleyan view that finite experience is transmuted in the Absolute than with his own view. (*To be continued.*)] **E. Cramaussel.** 'Pour un enseignement philosophique nouveau' (*suite*). **C. D. Broad.** 'Sur la dégradation de l'énergie.' [An attempt to refute M. Rougier's version of M. Selme's argument against Clausius's Theorem. M. Rougier has tried a *reductio ad absurdum*, but the absurdity is in his premises and not in Clausius's conclusions.]

ARCHIVES DE PSYCHOLOGIE. Tome, xvi, no. 2. **A. Ferrière.** 'La psychologie bibliologique d'après les documents et les travaux de Nicolas Roubakine.' [Outlines the life of Roubakine and his labours in behalf of popular scientific education, with illustrations of his methods. The proposed 'psychology of the book' is concerned with its contents, regarded as intellectual, affective and volitional; with its production, marketing and consumption (psychology of the author; of the printed work in re-



lation to author, distributor, public ; of the reader) ; and with the individual and social conditions of production and consumption.] **C. Baudouin.** 'Symbolisme de quelques rêves survenus pendant la tuberculose pulmonaire.' [Dreams due to repression of fears regarding health ; the will to live, not the sexual instinct, is in play.] **C. Baudouin.** 'Psychanalyse de quelques troubles nerveux.' [Ideas of persecution and neuralgias due to a sexual complex and the repression of a desire for culture ; sexual shock sublimated in artistic productivity.] **C. G. Jung.** 'La structure de l'inconscient.' [Psycho-analysis first reaches the personal unconscious, the layer of repression, and then penetrates to the impersonal unconscious, the collective psyche. The result is a dissolution of personality ; the patient feels himself to be like a god ; free rein is given to imagination. This stage can be overcome neither by regressive reconstitution of the *persona* nor by identification of individuality with the collective psyche ; the patient must remain in touch with his unconscious, and treatment must proceed by way of interpretation of his imaginative ideas.] Recueil de Faits : Documents et Discussions. **R. Weber.** 'L'orientation dans le temps pendant le sommeil.' [The tendency to wake at a given hour depends on an automatism ; guesses at the time of casual waking have an average error of 45 min.] Bibliographie. *Nécrologie*, 1919.

"SCIENTIA" (RIVISTA DI SCIENZA). Series ii., Vol. xxiv., September 1918. **Annibale Ricco.** 'La costituzione del Sole.' **Sir Joseph Larmor.** 'On Carnot's Theory of Heat.' **D. Fraser Harris.** 'Inertie fonctionnelle et momentum.' **T. N. Carver.** 'L'agencement financier d'une grande guerre.' **E. Benes.** 'La lutte des Tchécoslovaques pour leur État national.' Book Reviews. General Review. **Lavoro Amaduzzi.** 'Le principe de relativité. Ière Partie: L'immobilité de l'éther et l'hypothèse conciliatrice de Lorentz.' [A *propos* of recent books by Silberstein, Cunningham, and Lémeray.] Review of Reviews. Chronicle. French translations of articles in Italian and English.—Vol. xxiv., October, 1918. **H. G. Zeuthen.** 'Sur les définitions d'Euclide.' [Psychology confirms the view that the logical exposition of geometry given by Euclid does not represent the (intuitional) way in which geometrical truths were acquired. The sketch of the probable way in which this science grew up, and of the way in which its principles were given a new form, is wholly excellent. The reform may serve as a type of all other reforms in scientific principles.] **J. H. Jeans.** 'The Present Position of the Nebular Hypothesis.' ['Put forward in 1755 by Kant, and again independently in 1796 by Laplace, it is still in 1918, in the opinion of most astronomers, a speculation which has been neither proved nor disproved. Such a length of life, although it would be small for the speculations of metaphysics, is almost unparalleled in natural science. The fundamental reason for the great length of life will perhaps be found in the extreme difficulty of obtaining either observational or theoretical tests of the truth of the hypothesis. . . . It must be admitted that Laplace's ideas, when developed mathematically to their logical conclusions, show a striking capacity for interpreting many if not most of the formations observed in the sky. Perhaps it is vague clues rather than full explanations that have been yielded so far ; the time for full explanations has not yet come, but the outlook is full of hope. The only formation which Laplace's hypothesis now seems definitely unable to explain is, paradoxically enough, just that particular one which it was especially created to explain, namely the solar system. Laplace's intuition and his mathematical ideas were wonderfully accurate, but he was led into a faulty application of them. A final verdict cannot yet be pronounced—any



attempt to do so would be dogmatism—but it may be that before long the reasoned and considered verdict of astronomers will be that the hypothesis is at the same time a failure and a splendid success—a failure as regards the immediate purpose for which it was designed; splendid in having achieved a success greater than any that its author could possibly have dreamed of.] **F. G. Donnan.** 'La science physico-chimique décrite d'une façon adéquate les phénomènes biologiques?' ['The statistical laws of present physico-chemical science render great services in the description of changes and series of events which relate to the biological units in so far as these units can be regarded as huge molecular assemblages, but, as these units are organised individuals, we must await the development of a new physico-chemical science to help the biologist to attain his higher and final ends. The physicist or the chemist of to-day can be compared to the actuary of a great life-assurance company who knows how to calculate very precisely and with great certitude the means of life and death in a very large normal community. The physico-chemical science of the future may be compared to a great doctor who can predict the chances of life and death in the case of a particular individual at a given moment.'] **A. Graziani.** 'La politica economica e sociale per il dopo guerra.' **C. Stoyanovitch.** 'La coincidence des intérêts politiques et économiques de la nation Yougoslave et de l'Italie.' Book Reviews. General Review. **Lavoro Amaduzzi.** 'Le principe de relativité. II<sup>ème</sup> Partie: La formule de Lorentz de transformation des coordonnées et les généralisations subséquentes d'Einstein.' [This, together with the article on the same subject in the number for the previous month, forms a short and excellent account of the principle of relativity.] Review of Reviews. [A feature is formed by reviews of some recent papers on political, social, and economic problems of the war and after the war.] Chronicle. French translations of articles in English, and Italian. An admirable number.—Vol. xxiv., November, 1918. **A. C. D. Crommelin.** 'The Dwarf Stars.' **Carlo Somigliana.** 'La meccanica delle oscillazioni sismiche.' **J. Joteyko.** 'Le rôle biologique de la fatigue.' **F. Carli.** 'La guerre et la différenciation de l'Europe.' **A. Meillet.** 'Les langues dans le bassin de la Mer Baltique.' Book Reviews. Review of Reviews. Chronicle. French translations of articles in English and Italian.—Series ii. Vol. xxiv. December, 1918. **G. Armellini.** 'Il sistema planetario e le sue leggi empiriche.' **Jean Nageotte.** 'La matière organisée et la vie.' **W. M. Flinders Petrie.** 'The Origin of the Alphabet.' **F. J. C. Hearnshaw.** 'The Questions of the East as they have been transformed by the Russian Revolution.' **C. A. Reuterskiöld.** 'Les bases d'un nouveau droit des gens.' Critical Note. **J. A. Thomson.** 'Le rôle et l'importance de la synthèse scientifique.' [On Rignano's *Essays in Scientific Synthesis* (London and Chicago, 1918).] Review of Reviews. French Translations of Articles in Italian and English. Series ii. Vol. xxv. January, 1919. **G. R. Kaye.** 'Influence grecque dans le développement des mathématiques hindoues.' [Some centuries after Alexander's conquest of India (326 B.C.) was a much more important invasion, spiritual rather than political, which was the beginning of the 'golden age' of India. At this time much of the best that India has done in science, art, and literature was produced. In medicine, sculpture, the drama, astronomy, and astrology, points of contact with Greek civilisation and teaching have been established. In mathematics, in spite of the conclusions of many orient-alists who were not mathematicians, recent work has shown that the Hindus owe much if not all to the Greeks. In particular the usual account of a Hindu origin of our numerical notation is based on invalid reasons, as is shown by the work of the author from 1907 onwards and of Carra de Vaux in *Scientia* of 1917. It is not impossible that this argument

should be crowned by some event like the discovery of the lost books of Diophantus or the works of Hypatia.] **Sir Oliver Lodge.** 'Ether and Matter.' [A worthless, would-be popular account which the author tries to deck out with a dull and vague rhetoric. For example: 'Now the probability is that every sensible object has both a material and an ethereal counterpart. One side only are we sensibly aware of—the other we have to infer. But the difficulty of perceiving this other side—the necessity of indirect inference—depends essentially and entirely on the nature of our sense organs, which tell us of Matter and do not tell us of Ether. Yet one is as real and substantial as the other, and their fundamental joint quality is co-existence and interaction. Not interaction everywhere and always, for there are plenty of regions without matter—though there is no region without Ether—but the potentiality of interaction, and often the conspicuous reality of it, everywhere prevails and constitutes the whole of our purely mundane experience.'] **Giuseppe Levi.** 'La vita degli elementi isolati dall'organismo.' **L. Leger.** 'Le panslavisme.' **P. Otlet.** 'La société intellectuelle des nations.' Critical Note. **P. Bellezza.** 'Phonologie romane.' Book Reviews. [We may mention reviews of B. Russell's *Mysticism and Logic* (London and New York, 1916) and some other books by C. J. Keyser and E. V. Huntington on questions connected with the logic and philosophy of mathematics.] Review of Reviews. French translations of articles in English and Italian. —Series ii. Vol. xxv. February, 1919. **José M. Plans.** 'Sur l'introduction de la méthode des perturbations dans la Mécanique générale.' [The modern methods of celestial mechanics have been applied to certain problems of general mechanics by Kobb, Moulton (1911), and Behrens (1911). This paper indicates how much the same thing can be done with the classical method of perturbations, the original purpose of which was to solve by approximations the problem of three bodies. Unfortunately the number of questions to which this method can be applied is very limited. But this indication seems to the reviewer of importance from a philosophical point of view, and it is also very characteristic of the ideals of *Scientia*: indeed, we are shown that, if some scientific problem has been solved by a special method, it is sometimes useful to apply it—generalising it suitably—to other questions more or less similar.] **Alexandre Moret.** 'L'écriture hiéroglyphique en Egypte.' [A long and detailed account of the researches of Champollion and others, and description of the present state of knowledge of the subject. To a logician, it is particularly interesting that Egyptian writing was primarily *ideographic*, exactly as Chinese writing is—or, it may be remarked, just as are chemical, musical, mathematical, or logical symbols. In the course of evolution, this ideography approximated to *phonetic* notation—which is in principle that of modern languages; but 'though, in the course of centuries, it developed more and more precise means of expression, it never quite renounced its ancient elements'.] **A. C. Pigou.** 'The War and Social Reform.' **F. Virgili.** 'L'emigrazione tedesca prima della guerra e le conseguenze per la Germania dell'intervento dell'America nel conflitto mondiale.' Critical Note. **Edouard Claparede.** 'Les nouvelles conceptions éducatives et leur vérification par l'expérience.' Book Reviews. Review of Reviews. French translations of articles in English and Italian.

## IX.—NOTE.

### A PROOF THAT ANY AGGREGATE CAN BE WELL-ORDERED.

THE account of my process for well-ordering any given aggregate  $M$  described in *MIND* for July, 1918 (N.S., vol. xxvii, pp. 386-388), has been criticised by some on grounds which show, I think, that the point of the process has not been grasped. The starting-point of my process was the classes ( $\kappa$ ) such that  $\kappa\xi$  consists of all those chains of  $M$  which are of type  $\xi$ , and of those chains only. No assumption was made as to whether any suffix  $\xi$  is transfinite or not, or whether or no, for each given  $M$ , there is an upper transfinite limit to these suffixes. The process does not, of course, consist in choosing a chain arbitrarily out of each of these  $\kappa$ 's; but a rule was given for ranging each member of each  $\kappa$  in succession with one and only one "class of direct continuations". Naturally some of these classes of direct continuations are repetitions of certain other such classes, but the process of determinate repetition of a class is not a process that involves any arbitrary selection. It is very important to consider the rule (which is defined by induction) as a *whole*; so that the classes of direct continuations constructed at a certain stage of the rule are not "constructed by the (complete) rule": the rule successively adds, in a definite way, new chains to given classes of direct continuations as long as there are any chains to add.

Where  $\gamma$  is an ordinal without an immediate predecessor, a class of direct continuations which contains chains respectively of all types less than  $\gamma$  obviously allows us to determine, in a non-arbitrary and unique manner, a chain of type  $\gamma$ . For example, a class of direct continuations in which the members are respectively of all types less than  $\omega$ , and which may consequently be represented by

$$(a_1; a_1, a_2 \dots; a_1, a_2, a_3 \dots; a_n \dots; \dots),$$

determines uniquely the chain  $a_1, a_2, \dots, a_n, \dots$  of type  $\omega$  which is such that the above class of direct continuations consists of all segments of this chain of type  $\omega$  and of no other members. Thus it appears that, if we can determine a rule by which is constructed without any arbitrary selections a class of direct continuations containing chains of respectively all the types less than  $\gamma$ , we can construct a chain of  $M$  which is of type  $\gamma$ .

The rule for ranging anew all the members of all the  $\kappa$ 's in classes of direct continuations was given in my Note referred to, and here it is only necessary to remove some misunderstandings on the part of critics. In the first place, by a definite rule we construct actually—though theoretically—classes of direct continuations such that each of them defines a chain which exhausts  $M$ . It is obviously insufficient merely to define "the class of all chains that exhaust  $M$ ," since this class might conceivably be null: we could not, then, infer from the definition that the class contains members any more than we could infer, from the fact that all trespassers will be prosecuted, that there is at least one trespasser who will be prosecuted. The process of construction, which is effected by an induction which is, in general, transfinite and in which there is nothing

arbitrary at any stage, leaves no doubt as to the existence of several classes of direct continuations of which each one can be proved to define uniquely a chain which exhausts  $M$ .

In the second place, the question of the construction of a chain of type  $\gamma$ , where  $\gamma$  has no immediate predecessor, when we are given that chains respectively of all types less than  $\gamma$  are ranged in classes of direct continuations has strangely enough produced difficulties with some who do not seem to have realised the nature of a class of direct continuations and its relation, indicated above, with the chain that defines and is defined by it.

In the case where  $\gamma$  has an immediate predecessor,  $\gamma - 1$ , the construction as described in my previous Note has presented no difficulty. It should be remarked that the construction was defined by induction: it was given for  $\gamma = 1$  and also in general. Indeed, for  $\gamma = 2, 3, \dots$  successively, if all the  $\kappa$ 's of suffixes less than  $\gamma$  are rearranged in classes of direct continuations in the definite way given by this rule, then, provided that  $\gamma$  has an immediate predecessor, if  $\kappa_\gamma$  has members, all these members can be added on to the classes of direct continuations already formed in such a way that the process of manufacturing repetitions ("doubles") in definite number of certain of the above classes of direct continuations allows us to put each member of  $\kappa_\gamma$  with one and only one of these classes of direct continuations and their repetitions. There is nothing arbitrary in any stage of this process, and so Zermelo's principle of selection is not required. If  $M$  is finite, it is evident that, if there is a  $\kappa_\gamma$ , there is not necessarily a  $\kappa_{\gamma+1}$ ; but, if  $M$  is not finite, if there is a  $\kappa_\gamma$ , it follows that there is a  $\kappa_{\gamma+1}$ . It may further be remarked that the process which I gave, in *Nature*, vol. ciii., 1919, p. 45, for constructing a chain of type  $\omega$  out of an aggregate  $M$  for which we know that there are  $\kappa$ 's respectively of all suffixes less than  $\omega$  is in principle the same as the present method: the apparently simpler case being there worked out for the benefit of those critics who mistakenly supposed that this case could be treated more simply than the general case.

There only remains the case of  $\gamma$  having no immediate predecessor. But in this case it is at once evident, by what has been said above, that if all the  $\kappa$ 's respectively of all suffixes less than  $\gamma$  are rearranged in classes of direct continuations, each of these classes defines a chain of type  $\gamma$ . Consequently the members of  $\kappa_\gamma$  can be constructed in terms of members of the  $\kappa$ 's of suffixes less than  $\gamma$ .

If, then, we do not come across any member of a  $\kappa$  that exhausts  $M$ , we can proceed from suffixes less than  $\gamma$  to  $\gamma$ , whether or not  $\gamma$  has an immediate predecessor. If, then, it were possible that the series of  $\kappa$ 's should have no upper transfinite limit to their suffixes, the complete rule given would construct several classes of direct continuations such that each of them determines a chain of the type ( $\beta$ ) of all ordinal numbers. My argument of 1904 shows that this is impossible, and that therefore there is an ordinal number  $\zeta$  such that, though there are  $\kappa$ 's of all suffixes less than  $\zeta$ , there is no  $\kappa_\zeta$ .

But, in this case, if no member of one of these  $\kappa$ 's of suffixes less than  $\zeta$  were to exhaust  $M$ , it would follow, by the application of the reasoning given above to the fact that  $\zeta$  has not an immediate predecessor, that there are chains of  $M$  which are of type  $\zeta$ , and that thus there is a  $\kappa_\zeta$  which is not null. Hence, if there is an ordinal number  $\zeta$  such that there is no chain of  $M$  which is of type  $\zeta$ , it is necessary that there should be a chain of type less than  $\zeta$  which exhausts  $M$ . Thus the fundamental point is established.

The two chief critics with whom I have discussed my method are the two best known "mathematical logicians," whom I will call "W" and

"R". W informed me that he was "bored with well-ordered series," by which I suppose he had not recognised the rather obvious fact that the problem of well-ordering was fundamental to the universal validity of the development of a remark of Schoenflies that constitutes W's most important discovery in the arithmetic of transfinite cardinal numbers. After a number of irrelevant criticisms, which showed conclusively that W had not understood the point of my method, he excused himself, on the grounds of having other mathematical things to do, from further considering the solution of a problem which is fundamental to most of the work of himself and others in the theory of aggregates, and is the most important problem in the principles of mathematics. I now come to R. For fifteen years, it has been generally recognised that the difficulty of the multiplicative axiom cannot be surmounted by a direct method: the method I gave may be called indirect. The chief criticism of R on my method was that there are difficulties in the other method. Such a criticism might almost cause one to suspect that "mathematical logic" is a very different thing from logic.

The first of two minor criticisms (advanced by men, "H" and "B," who are not "mathematical logicians" to quite such a high degree) is that a chain of type  $\gamma$ , where  $\gamma$  has no immediate predecessor, cannot be constructed without a *petitio* from a class of direct continuations in which the members are respectively of all types less than  $\gamma$ . This criticism is based on non-realisation of what a class of direct continuations is, and I hope I have explained things in what precedes. The other criticism was that the rule constructs classes of direct continuations in which there is no chain of type greater than 2, say, and that this class cannot determine a chain that exhausts M. The reply is that the *complete* rule constructs no such class: such classes are constructed at a certain stage of the rule, but subsequent stages add new members to these classes.

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